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Household Health Seeking Behavior in Zambia

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Abstract

This report represents an effort to supplement Zambia's long-running debate on health policy reforms. Since the introduction of health reforms in Zambia in 1992, there have been several policy issues that have been the subject of continuous discussion, especially in the area of health care financing. Some of these issues address raising more money for the health sector, improving the use of money for the health sector, and ensuring transparency and efficiency in the use of financial and technical assistance.

This study examines consumer behavior in Zambia, with a special focus on that country's health care financing options and strategies. The study analyzed information on health seeking behavior, provider choice for consumers of health services, and participation in prepayment schemes.

The report concludes, among other things, that prepayment schemes have the potential to improve social differentiation in the access to health care. But the existing schemes must be improved to ensure greater equity in their utilization. Additionally, the report concludes, regardless of the user fee charged at any given institution, the use of its services diminishes greatly with the distance at which the potential clientele are located.

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Acronyms

CSO	Central Statistical Office
GDP	Gross Domestic Product
IHE	Institute of Health Economics
IMF	International Monetary Fund
K	Kwacha
LCMS	Living Conditions Monitoring Survey
MMD	Movement for Multi Party Democracy
MOH	Ministry of Health
PHR	Partnerships for Health Reform
SEA	Standard Enumeration Area
UNZA/DE	University of Zambia Department of Economics
USAID	United States Agency for International Development
ZDHS	Zambia Demographic Health Survey
ZIMCO	Zambia Industrial and Mining Company

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Executive Summary

December 1990 marked one of the major turning points in Zambia's political history. The country's constitution was rewritten, opening the door to a multiparty based democratic system. In October 1991, elections were held and the Movement for Multiparty Democracy (MMD) defeated the ruling United Independence Party under President Kenneth Kaunda. Frederick Chiluba, the leader of the MMD, became Zambia's second president and formed his government in November 1991.

In 1992, the government produced a National Health Policy Document that outlined health-sector reforms. The reforms aimed to improve equity, access, quality, and cost-effectiveness of the country's health services. A year later, user cost-sharing was introduced for health services. There were fears, however, that these charges, although much lower than full cost-recovery levels, could hurt the poor and other vulnerable groups. Therefore, in 1994, the government introduced prepayment schemes and demographic-based exemptions. Individuals ages 5 and younger, those 65 and older, and those suffering from chronic diseases were exempted from payment of fees. An additional scheme was introduced in 1995 as part of poverty-alleviation measures. The scheme, implemented by the Ministry of Community Development and Social Services in collaboration with the Ministry of Health, has been operating on a pilot basis in nine districts since August 1995.

Since the introduction of health reforms in Zambia, several policy issues have been debated, especially in the area of health care financing. Some of these issues address raising more money for the health sector, improving the use of money for the health sector, ensuring transparency and efficiency in the use of financial and technical assistance from cooperating partners, and improving the private/public partnership in the financing and provision of health services. Information on health service costs has fueled the debate on these policy questions, and consumer and household health seeking behavior is one area where crucial information is needed. The high priority given to equitable access to quality health services in the country indicates the relevance of such information. Information on consumer behavior is crucial to a better understanding of who benefits from what type of services and to assessing household willingness and ability to pay for health services. Data on household and consumer behavior also reveal the willingness and ability of different segments of the Zambian population to participate in health financing schemes that are being debated.

This study provides new information on consumer behavior to add to the debate on health care financing options and strategies, and reaches a number of important conclusions.

In 1996, data from the Living Conditions Monitoring Survey, or LCMS, indicated that Zambian households spent an estimated 65 to 70 billion kwacha on health care services. This figure does not include some health-related costs, notably transport, since the LCMS did not have any data on these costs. It also does not include amounts spent on treatment abroad. The public expenditure on health in 1996 was 67 billion kwacha. Together, the total expenditure on health in the country was more than 130 billion kwacha, or 4 percent of the country's national income.

The above statistics suggest there is an almost equal sharing of costs between the government and private households, and that a large amount of money nationwide is spent on health. Yet the epidemiological profile or the performance on health indicators does not seem to correlate with such expenditures. The study's findings suggest there is considerable scope to improve the of health care,

as well as improve equity in the administration of the various schemes to ensure access of health care services to everyone.

An interesting conclusion emerging from the regression analysis in this study is that distance to the nearest health facility rather than price is the significant variable determining access to health services. Whatever the user fee charged at any given institution, the probability of its services being demanded diminish with the distance at which the potential clientele are located. The same goes for availing of exemption benefits. We note, for instance, that the probability of use of services of a sick individual located less than a kilometer from a health center is 28 percent. That drops to 13 percent when the individual is located at a distance of 10 kilometers or more. The distance factor would impinge much more in the rural areas where there are more severe shortfalls in transport facilities and fewer all-weather roads.

The prepayment schemes introduced in the Lusaka and Copperbelt provinces have attracted a large number of individuals and have the potential to change the social differentiation in the access to health care. But the schemes will have to be improved to ensure greater equity in their use. At present, the highest income quintile has the highest participation (49 percent) in the scheme for care at government clinics or health centers in the two provinces and the lowest proportion of individuals paying user fees directly out of pocket. On the other hand, less than 12 percent of the sick in the lowest income quintile participate in the clinic/health center scheme, and by corollary make the higher contributions to user fees.

Below are among the main policy recommendations:

- ▲ prepayment schemes should be extended to all provinces in the country and ways should be found to encourage lower income groups to increase their participation in them;

- ▲ the administration of the exemptions should be improved to ensure their more effective targeting so as to minimize the two-fold errors: providing exemptions to those who do not deserve them and not providing them to those who are deserving;

- ▲ the adverse impact of distance to health facilities should be mitigated especially in the rural areas;

- ▲ health financing policy should be correlated to drug policy; for instance, using cost-sharing revenues to improve drug availability;

- ▲ there is a need to improve dissemination of information regarding policy changes particularly among intended beneficiaries; and

- ▲ more data gathering and research should be undertaken to provide better information for policy monitoring, evaluation and changes.

1. Introduction

1.1 Overview of Political and Economic Transition in Zambia

December 1990 marked one of the major turning points in Zambia's political history. The article in the constitution forbidding the formation of plural political parties was repealed, paving the way for transition from the Second Republic, characterized by a so-called one-party participatory democracy, to the Third Republic, characterized by a multiparty-based democratic system. In October 1991, elections were held and the Movement for Multiparty Democracy (MMD) defeated the ruling United Independence Party (UNIP) under President Kenneth Kaunda. Frederick Chiluba, leader of the MMD, became Zambia's second president and formed his government in November 1991.

1.2 Health Reforms

In 1992, the government produced a National Health Policy Document that outlined reforms for the health sector. The aim of the reforms was to improve equity, access, quality, and cost-effectiveness of health services in the country. The mission statement was "to provide Zambia with equity of access to cost-effective quality health care as close to the family as possible." Sustainability, leadership, accountability, and partnership are considered integral parts of the reform process.

The major components of the reforms are:

- Decentralization of management decision-making concerning health care services from the Ministry of Health to the district level. This is done through the creation of autonomous District and Hospital Management Boards and strengthening of local planning, budgeting, and managing capacity. The Central Board of Health was created as the national administrative agency at the central level responsible for the overall technical management of the health sector and the production of quality health care services. The Ministry of Health now concentrates on overall strategic direction.

- Redirection of funding from centrally managed projects toward funding for activities defined by communities and districts, and from the higher to the more cost-effective lower levels of the referral system.

- Introduction of user fees and pricing of services to influence health seeking behavior to the appropriate referral levels.

- ▲ Increasing community involvement and ownership through establishment of neighborhood health communities.

- ▲ Opening of the sector to wider private sector participation.

- ▲ The unparalleled donor coordination in support of the Zambia Health Sector Investment Programme and the common "basketing" of donor funds to support District Action Plans, which is seen as a model for Africa by World Bank, the World Health Organization, and many bilateral donors.

In 1993, user cost sharing was introduced for health services. However, there were fears that these user charges, though much less than full cost-recovery levels, could nevertheless prove inequitable by adversely affecting the poor and vulnerable groups. Hence, in 1994, the government introduced prepayment schemes and demographic-based exemptions. Individuals 5 years and below and 65 years and above and those suffering from chronic diseases were exempted from payment of fees. Further, a Health Care Cost Scheme was introduced in 1995 as part of poverty alleviation measures. The scheme is implemented by the Ministry of Community Development and Social Services in collaboration with the Ministry of Health. The aim of the scheme is to ensure that no one is denied access to health services on grounds of inability to pay user fees. The scheme has been operating on a pilot basis in nine districts since August 1995.

1.3 Main Health Reform Areas of Debate

Since the introduction of health reforms in Zambia, there have been several policy issues that have been subjects of continuing debate, especially in the context of health care financing. Some of these issues relate to ways of raising more money for the health sector, improving the use of the money for the health sector, ensuring transparency and efficiency in the use of financial and technical assistance from cooperating partners, and improving the private/public partnership in the financing and provision of health services.

Each of these policy areas has a number of specific questions that remain to be answered. For instance, with respect to augmenting revenues for the health sector, questions relate to the philosophy underlying cost sharing, stipulation of preference for specific modes of cost sharing, identification of institutions responsible for defining cost sharing schemes, specific modes of implementation of user charges, retention of cost sharing revenues, and financing of essential packages and non-package services through commissioning and through non-commissioned providers.

Debates on the above mentioned policy questions are being supported by information on the costs of health services and health expenditures reviews. Information is also being compiled on the performance of existing district cost-sharing schemes and feasibility of franchising for private providers. Much of this information is being obtained from studies for the Ministry of Health through technical and financial support provided by a variety of institutions, such as the Department of Economics of the University of Zambia, the Institute of Health Economics, Sweden, the London School of Hygiene and Tropical Medicine, the Swedish International Development Agency, Partnerships for Health Reform Project (PHR), and the United States Agency for International Development (USAID). This report is one such study.

1.4   Rationale of the Study

One area where crucial information is needed is consumer and household health seeking behavior. The pertinence of such information lies in the high priority given to the promotion of equitable access to quality health services under health reforms in the country. Information on consumer behavior is critical to a better understanding of who benefits from what type of services and assessing household willingness and ability to pay for health services. Data on household and consumer behavior also provide information on the willingness and ability of different segments of the Zambian population to participate in health financing schemes that are currently being debated.

Accordingly, the objective of this study is to provide complementary information on consumer behavior to support the debate over health care financing options and strategies. To reach that objective, the study provides representative information on health seeking behavior, provider choice for consumers of health services, participation in prepayment schemes, distribution of exemption measures' coverage, and household health related expenditures based on data from the Living Conditions Monitoring Survey (LCMS).

1.5   Organization of the Report

Section 2 of this report gives a brief background of Zambia's geography, history, politics, economics, population dynamics, and a general overview of the health sector. Section 3 provides some detail about the Living Conditions Monitoring Survey as data from this survey are used for this analysis. Section 4 provides information on health care seeking behavior specifically related to curative and obstetric care. Section 5 describes how prepayment schemes and exemptions have been operating, especially from the point of view of fulfilling the objective of equity. Section 6 tries to gauge the willingness and ability of households to pay for health-related expenditures. The final section provides a summary of the findings and seeks to draw some policy implications.

2. Background

2.1 Zambia: Geography, Political Environment, and History

Zambia, a landlocked country in southern-central Africa, is bordered by seven countries: Tanzania to the northeast, Malawi to the east, Mozambique to the southeast, Botswana and Namibia to the southwest, Angola to the west, and the Democratic Republic of Congo (formerly Zaire) to the north. It has a vast area of 752,620 kilometers, making it the sixteenth largest nation in Africa. Its current population, however, is estimated to be 9.5 million, yielding a low density of 12 persons per square kilometer. Consequently, there is little pressure on land except in the major cities. The vastness of the territory coupled with the low population density poses a challenge to the delivery of health services. As seen in this report, the distance of the households to nearest institutional health facility is a major factor in determining the extent of the use of the health facilities, especially in the rural areas.

The country is rich in natural resources: Forty-five percent of the water resources of southern Africa are within Zambia, including part of the largest man-made lake in the world, Lake Kariba, which is a major source of hydroelectric power. Zambia is also one of the world's largest producer of copper, which continues to be its principal export and foreign exchange earner. The country also has significant reserves of other minerals such as lead, zinc, and coal.

Zambia is administratively divided into nine provinces: Central, Copperbelt, Eastern, Luapula, Lusaka, Northern, North-Western, Southern, and Western. Each province has its own administrative headquarters and is further subdivided into districts. There are 72 districts in all. Four of the provinces, Central, Copperbelt, Lusaka, and Southern, known as the line-of-rail provinces, have consistently been more developed than the rest of the country.

From the late 19th century to independence, the Republic of Zambia was known as Northern Rhodesia, after Cecil Rhodes, who founded the British South Africa Company under royal charter in 1889. It was part of the Federation of Rhodesia and Nyasaland and remained as such until 1963. In January 1964, an election was held and Dr. Kenneth Kaunda's United National Independence Party won 55 seats, Harry Mwaanga Nkumbula's African National Congress won 10 seats, and 10 seats were reserved for Europeans. On October 24, 1964, Zambia became an independent republic (the First Republic) within the Commonwealth. Since its independence, the country has had one of the most stable political regimes in Africa. There have, however, been several important political changes.

In 1973, there was a transition to a one-party state and the Second Republic came into existence. This lasted 17 years, during which period Kaunda and his party were in power. As previously mentioned, a major turning point in Zambia's political history occurred December 4, 1990, when the constitution was amended to pave the way for plural politics and marked the birth of

Box 1: Political and Economic Milestones in Zambia's History

1964   Zambia attains independence on 24 October; Kenneth Kaunda is the first President.

1968   Announcement of the Mulungushi Reforms leading to the nationalization of most large industrial and commercial enterprises in the country.

1969   Announcement of the Matero Reforms leading to the nationalization of the mining companies in the country.

1972   Signing of the Choma Declaration making Zambia a one-party state.

1975   Watershed speech by President Kaunda abolishing freehold title to land in the country.

1982   Beginning of economic liberalization with the de-controlling of prices of several commodities.

1985   Achievement of a high level of liberalization with the de-control of interest rates and auctioning of foreign exchange.

1986   The first ever food riots in protest against the increase in the price of mealie meal (maize flour), the staple food of Zambia.

1987   Break up of relations with the International Monetary Fund (IMF), reintroduction of controls and announcement of a New Economic Recovery Programme: Growth from Own Resources.

1989   Initiation of a rapprochement with the IMF.

1990   Amendment of Article 4 of the constitution which proscribed the formation of plural political parties.

1991   Multiparty elections in October and formation of the MMD government in November under President Chiluba.

1992   Establishment of the Zambia Privatization Agency and introduction of foreign exchange bureaux.

1993   Liberalization of crop marketing, introduction of auctioning of treasury bills and the cash based budgeting system.

1994   Suspension of the Exchange Control Act, establishment of the Zambia Revenue Authority, Lusaka Stock Exchange and the Securities and Exchange Commission.

1995   The dissolution of ZIMCO (Zambia Industrial Mining Company), the holding company of all parastatal companies.

1996   Amendment of the Constitution to restrict the Presidency to "indigenous" Zambians (i.e., only those whose both parents were born in Zambia) and declaration in the Preamble that Zambia is a Christian State; re-election of the MMD and President Chiluba for a second successive term of office.

1997   Beginning of the privatization of the mines.

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the Third Republic. In the first multiparty elections held under this Third Republic in October 1991, the Movement for Multiparty Democracy was voted to power with an overwhelming majority, and Frederick Chiluba became president. After the expiry of its five-year tenure, elections were held again in November 1996, and the MMD and President Chiluba were returned to power with a resounding victory, despite vociferous protests from opposition parties, some of whom boycotted the elections.

Since 1991 several major policy and institutional changes have taken place in the economic arena. The aim of these changes has been to transform the economy from a highly centralized, controlled, and state-dominated economy to a competition-oriented economy. The major political and economic milestones in Zambia's history since independence are summarized in Box 1.

2.2   Population and Health

Some of the major characteristics of Zambia's population are: a primarily young population, high but declining population growth, high but declining fertility rates, uneven spatial distribution of the population, and an increasing male to female sex ratio. According to the 1990 Census and the LCMS, 45 percent of the population was between the age of 0–14 years, yielding a child dependency ratio of 87.2. The annual population growth rate, which was 3.1 percent for the period 1969–80, came down to 2.7 percent for the period 1980–90. There was a high disparity in the growth rates of the rural and urban population during 1969–80: 1.6 percent for the rural population and 6 percent for the urban population. However, this disparity has largely evened out, and for the period 1980–90, the growth rates of the rural and urban populations were 2.8 and 2.6 percent, respectively. In other words, the rural population growth has overtaken that of the urban population.

The total fertility rate, which was 6.9 in 1969, rose to 7.2 in 1980 but came down to 6.7 in 1990 and was estimated at 6.1 in 1996. In Zambia, there are more females than males, although the picture is different in this regard in the rural and urban areas. However, the sex ratio (number of males per 100 female), which was 95.8 in 1980, rose to 96.1 in 1990. In the rural areas, the sex ratio rose from 91.5 in 1980 to 93.5 in 1990 (but was still below 100). The sex ratio in the urban areas declined from 102.7 in 1980 to 100.2 in 1990 (but continued to be above 100). It has been conjectured that one reason for the low sex ratio in the rural areas as compared to the urban areas could be as a result of out-migration in the former and in-migration in the latter. And the low sex ratio for Zambia as a whole could be the result of high male child mortality or high adult male mortality.

The population density (persons per square kilometer), which was 5.3 in 1969, rose to 9.8 in 1990 and was estimated at 12.6 in 1996. But even this density is relatively low by international standards. Further, the density is not even across the country. In 1990, while the density was 45.6 in the Copperbelt and 45.1 in Lusaka, it was as low as 3.1 in North-Western Province and 5.8 in Western Province.

An epidemiological profile based on the LCMS data is provided in Section 4.1.1. Here, however, trends in health indicators during the 1990s are described.

Life expectancy was already low in 1990 at 46.9 years, but this came down further to 45.5 years in 1995. This low life expectancy is a reflection of high mortality, especially of children and women. According to the statistics provided by the Zambia Demographic Health Surveys of 1992 and 1996, the infant mortality rate, which was estimated at 92 deaths per 1,000 between 1982–86, rose to 106 per 1,000 during 1987–92 and further to 109 per 1,000 during 1992–96. Likewise, the child mortality rate went from 90.2 per 1,000 to 89.9 per 1,000 and further to 98.4 per 1,000 during those same periods. And the under-5 mortality rate also increased from 174 per 1,000 to 186.5 per 1,000 to 197 per 1,000 during the stated periods.

The Maternal Mortality Ratio (per 100,000 live births) is extremely high. During the 1990–96 period, it was estimated at 649.

The high mortality rates of the children are also to be seen alongside the poor nutritional status of those who survive. According to the 1996 LCMS, 48 percent of the children are stunted, 25 percent underweight, and 6 percent wasted. These figures suggest a high degree of malnutrition.

The country thus has a major task of reversing the above unsalutory trends in the health indicators. In recognition of these trends, the government, through its National Programme of Action Document of 1994, set specific targets to be attained by the year 2000: reducing maternal deaths by 50 percent, bringing down the Infant Mortality Rate to 65 per 1,000, reducing Under-5 Mortality Rate to 100 per 1,000, and reducing moderate and severe malnutrition among children by 25 percent.

2.3   The Zambian Economy and Poverty

Zambia has long been regarded as a mononuclear economy dominated by a single product, copper. Copper mining activity accounted for a significant part of the national output, employment, government revenues, and foreign exchange. The rest of the economy was dominated by large-scale, imported capital-intensive, monopolistic parastatals concentrated mostly along the line-of-rail provinces. Thus, the central feature of the economy was a lack of diversification, sectoral, structural, regional, technological, scale, and ownership, and in terms of exports and resources use. Such an economy operating under a controlled macroeconomic environment resulted in inflexibility to adapt to changing circumstances and impeded growth. By the end of the 1980s, the country reached a critical situation characterized by a declining gross domestic product (GDP), triple digit inflation rates, high nominal, but negative real interest rates, huge budget deficits, declining investments and savings, a flourishing black market in foreign exchange, shortages of basic goods and services, dilapidated social and physical infrastructure, low levels of business and consumer confidence, huge external debts, and poverty embracing two-thirds of the population. The economic reforms introduced since 1991 (see Box 1) were put into place in an effort to revive growth in the economy through promoting diversification in all its various forms, rebuilding finances, arresting the decay of infrastructure, promoting the development of the private sector, and disengaging the government from commercial activity. Health reforms, as indeed reforms in the other sectors, were part of a new economic culture that the overall macroeconomic and institutional changes sought to instill in the economy and in the people. In particular, the abolition of subsidies and the introduction of the notion of cost sharing was done in order to make the people aware that there was no such thing as a "free lunch" for anyone.

A detailed discussion of the impact of the economic reforms is out of place in this paper. However, one aspect that needs to be somewhat elaborated upon is the poverty situation in Zambia since it is closely correlated with equity and the distribution of the benefits of growth in general and with the distribution of the supply of social services such as health care.

Poverty has always been and continues to be a most conspicuous and ubiquitous phenomenon in Zambia. A recent analysis done by the Central Statistical Office (CSO) and the World Bank of the data obtained from the 1991 and 1993 Priority Surveys and the LCMS of 1996 shows the evolution of poverty during the 1990s. The overall incidence of poverty in terms of income/expenditure data and calculated poverty lines rose from 69.7 percent in 1991 to 74 percent in 1993 but fell again to 69 percent in 1996. Fifty-three percent were extremely poor in 1996.

Poverty is more prevalent in rural areas. About 83 percent of the rural population was poor in 1996 compared to 46 percent of the urban population. And while 27.3 percent of the urban population was extremely poor, the corresponding percentage for the rural areas was 68.4. Again, in terms of the distribution of the poverty in the country, 75.5 percent of the poverty in Zambia is found in the rural areas while the remaining 24.5 percent is urban. However, in 1991, moderate poverty was more prevalent in urban areas: 65.8 percent compared to 34.2 percent in the rural areas. But by 1996,

the rural areas had overtaken the urban areas even in respect of moderate poverty: 56.9 percent in the rural areas and the remaining 43.1 percent in the urban areas.

While it is somewhat heartening to note that since 1993, there has been a declining trend in the poverty situation, overall poverty levels remain high, nearly 70 percent, and particularly pronounced in the rural areas.

There is also a high degree of income inequality. The Gini coefficient in 1991 was estimated at 0.59. Although this coefficient has come down to 0.50 by 1996, it is still a high value. Thus poverty and inequality are very high in Zambia, and this factor should be kept in mind when considering the impact of cost-sharing measures such as user fees for health services.

3. Overview of the Living Conditions Monitoring Survey

The Living Conditions Monitoring Survey of 1996, carried out by the Central Statistical Office, is the monitoring/data collection component of the Social Recovery Project II, which is funded by the Norwegian Government through the World Bank.

The overall objective of LCMS is to highlight and monitor living conditions in Zambia and is therefore organized in such a way as to provide a set of poverty and relevant socioeconomic indicators on an annual basis.

The specific objectives of the survey are to:

- Monitor the effects of government policies on household and individuals, such as cost sharing in the context of health reforms.

- Monitor poverty levels and severity of poverty over time; and,

- Identify vulnerable groups.

The LCMS is based on a national sample covering both rural and urban areas throughout Zambia. The primary sampling unit of the LCMS is the Standard Enumeration Area (SEA). The number of SEAs selected from provinces and districts was determined by the Equal Allocation Method. Except for the Copperbelt and Lusaka provinces, the number of SEAs allocated to a province was proportional to its population size. The SEAs were selected using a Circular Systematic Sampling method. In all, 610 SEAs were selected, of which 349 were in rural areas and 261 in urban areas. The secondary sampling unit is the household. About 15 households were selected from each rural SEA while 25 were selected from each urban SEA.

The LCMS used three types of questionnaires. The household questionnaire was concerned with household characteristics, including household expenditure on various medical items in the month of the survey. The individual questionnaire was for all those aged 12 years and above. The child questionnaire was administered to children aged 0 to 11 years. The adult and child questionnaires had separate health sections. These sections were designed to elicit information on the incidence of sickness, the prevalence of various symptoms, self-administered medicine, health consultation, utilization of various health providers, and mode and amount of payment for medical care, including prepayment schemes, among other items.

Survey data collection took place in September and October 1996. A total of 11,774 households were interviewed in the survey, covering 61,547 persons. Among the 61,547 individuals who were interviewed, 15,387 reported that they had at least one bout of sickness in the two weeks preceding the survey, and therefore the health sections of the survey were administered to this sample of 15,387 sick individuals.

Given that the survey is expected to be repeated annually until 1999, amendments can be made to the health sections in the questionnaire in order to enhance the monitoring and evaluation of health reforms.

4. Health Care Seeking Behavior

Health care seeking behavior patterns describe who is getting which type of health services and is closely related to issues of equity of access to health services. Self-medication, entry in the modern health sector, and provider choice are key aspects of health seeking behavior whose patterns depend not only on the quantity and the composition of the supply of health services, but also on the financial and geographical access of these services and the information and perceptions that households and individuals have about their relative efficacy.

Patterns among different segments of the population highlight key policy issues related to who benefits from health services. In addition, utilization patterns of different levels of the health system may have broad implications for efficiency of the health sector. Choice of level may be influenced by a variety of mechanisms, including prices charged contingent on how responsive the use of health services is to prices.

4.1   Curative Care Seeking Behavior

4.1.1   Epidemiological Profile Based on Self-Reported Symptoms

The way in which sick individuals or their caretakers in the home perceive their illness could determine what type of health care they will seek and how much money and household members' time is committed for seeking treatment. Table 1.1.1 describes the five most common self-reported symptoms (which represented 91 percent of all symptoms reported) by age and sex. Among the nearly 15,400 individuals who reported an illness during the two weeks preceding the survey, the most commonly self-reported symptoms were fever/malaria: 30 percent of the sick reported having had fever/malaria during the two weeks preceding the survey. Next, 23 percent of the sick reported having experienced a cough or cold. Fever/malaria, cough/cold, and headache were the three most commonly reported symptoms. In addition, a sizable portion of the sample of sick individuals reported to have experienced abdominal pains or diarrhea. Finally, about 9 percent of the population reported to have been diagnosed with a chronic disease. Overall, 23 percent of the population reported at least one symptom in the two weeks preceding the survey. If this can be taken to be typical, then it implies that nearly a quarter of Zambia's population is sick in any given two-week period.

The prevalence of self-reported fever does not vary among demographic groups; the prevalence of self-reporting of cough or cold displays a similar pattern. In contrast, self-reporting of diarrhea is highly skewed and is more common among children under 5 years, as expected, and reporting of chronic disease increases steadily with age and is also higher in female headed households.

Except in one case, self-reported symptoms do not vary much among socioeconomic groups (see Table 1.1.2) and geographical areas (see Table 1.1.3). Self-reporting of chronic diseases, however, is higher among members of households headed by a government employee or a parastatal employee compared to members of households headed by self-employed individuals. The observed pattern of reporting of diagnosis with a chronic disease among social groups is consistent with the

increase from lower income groups to higher income groups. The geographical distribution of higher-income groups may explain why diagnosis with a chronic illness is higher in the Lusaka, Copperbelt, and Southern provinces compared to other parts of the country. Those with higher incomes tend to live in urban areas, so their physical and financial access to facilities and doctors capable of diagnosing chronic illness is greater.

4.1.2   Self-Medication

Among those who reported an illness during the two weeks preceding the survey, 34 percent used self-medication only (see Table 1.2.1). The prevalence of self-medication does not vary much by demographic characteristics of the individual or the socioeconomic characteristics of his household (see Tables 1.2.2 and 1.2.3). Between provinces, however, the prevalence of self-medication is lower in Central and Southern provinces, where it averages 28 percent, and higher in the Luapula and Northern province, where it averages 38 percent (see Table 1.2.4).

Sick individuals who self-medicated spent an average of K700[1] during the two weeks preceding the LCMS survey. Although the percentage of the population self-medicating is, by and large, uniform across all categories of every socioeconomic characteristic, socioeconomic variables have a determining influence on self-medication expenditure. Expenditures are highest for sick individuals belonging to households where the head of the household is male, having secondary education or higher, or employed in the private or parastatal sector. Expenditures are also distinctly higher for those belonging to the richest income group (K1400). The average self-medication expenses are significantly higher in urban areas and in the line-of-rail provinces, notably Lusaka (Kl400) and the Copperbelt (K1400). In short, average self-medication expenses depend on household and individual characteristics that are positively correlated with the ability to pay. Expenditures on self-medication are highest among individuals who report having been diagnosed with a chronic disease (K1052).

In summary, the prevalence of self-medication is high in Zambia. Moreover, a lot of money is spent on self-medication. Based on the LCMS data, the annual expenditure on self-medication works out to K13.2 billion for the entire country.

Self-medication for minor illness based on sound information may have positive implications for health status. However, self-medication among poorly informed segments of the population may result in a waste of household resources and, eventually, a drain on public resources if illnesses are treated late after ineffective self-medication. Accordingly, these results suggest that attention should be paid by public health authorities to information and health education concerning self-medication.

4.1.3   Entry in the Modern Health Delivery System

The first three columns of Tables 1.3.1 to 1.3.5 summarize entry in the modern health delivery system by the symptoms perceived by the sick, the individual's demographic characteristics, the socioeconomic characteristics of the household, and region of residence. Among those who reported an illness, 43 percent sought care at a health institution. Only a little over 1.3 percent of individuals

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[1] 1100 Kwacha (K) = US$1.00.

reported seeking care from traditional healers[2]; accordingly, nearly 42 percent of the sick sought care at a modern health institution during the two weeks preceding the survey.

Perceived symptoms have a moderate influence on the decision to use modern health care services. For all of the five major symptoms, modern services are used between 35 and 52 percent of the time (mean 43 percent). Those with headaches used modern care least and those with diarrhea used them most. Those with a chronic illness used modern services 51 percent of the time when ill.

Socioeconomic characteristics of the household also affect use of the modern health sector. Sick individuals who are members of households headed by a male have a higher probability of entering the modern health sector. While sick persons from households headed by individuals with no schooling or with a primary level of education have a comparable likelihood of entering the modern health sector, those from households headed by individuals with secondary level of education or higher have a significantly higher probability of entering the modern health sector.

Among the sick from households headed by a self-employed individual, 39 percent sought care at a modern health provider; this level of utilization of modern health provider services is comparable to the level observed among the sick from households headed by individuals employed in the private sector. In contrast, 52 percent of the sick from households headed by a government employee entered the modern health sector. The level of utilization of modern health services among the sick from households headed by a parastatal employee reached 58 percent.

The geographical area where the sick live has an effect on the likelihood of entering the modern health sector. First, individuals who live in the urban areas have a 19 percent higher probability of entering the modern health sector than their rural counterparts. Similarly, individuals who live in provinces that are highly urbanized, such as Lusaka, Copperbelt, Central, and Southern provinces, have a higher probability of entering the modern health sector compared to provinces such as Eastern, Luapula, or Northern.

Given the use of demographic-based exemptions in the modern health sector (see Section 5), age operates as a variable affecting the likelihood of entering the modern health sector for curative care. Indeed the highest level of entry in the modern health sector is observed among the sick aged under five years: 52 percent of the sick under five years of age entered the modern health sector compared to a range between 34 percent and 42 percent among other age groups. Unexpectedly, the elderly above 65 years of age who also are supposed to benefit from demographic-based exemptions have among the lowest probability of entering the modern health sector, suggesting that factors other than price may be constraining the elderly's access to modern health services.

Another factor with an effect on the likelihood of entering the modern health sector is diagnosis with a chronic disease. About 50 percent of sick individuals with chronic disease sought care in the modern health sector compared to 41 percent among individuals who reported not to have been ever diagnosed with a chronic disease.

Regression analysis results presented in Table B1.1 indicate that fees in the modern health sector and household income have a low effect on the probability of entering the sector. However, distance to health facilities, and distance to the nearest health center in particular, operates as a

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[2]This percentage seems counter intuitive and incredibly low and could be due to respondents' lack of willingness to provide such information or data limitations of the LCMS. However, it must be noted that households spent 13 percent of their total monthly health related expenditures on fees to traditional healers. This percentage is nearly the same as that spent on fees to providers in the modern health sector (see sec 5).

rationing device for entry in the modern health sector. More than 53 percent of the sick who live within 1 km from health centers entered a modern health sector during the two weeks preceding the survey. The probability of entering the modern health sector declines with distance from the nearest health center to reach 36 percent between 5 to 9 kms and 29 percent beyond 10 kms.

4.1.4   Provider Choice

While seeking care in the modern health sector, the sick face choices that vary from government hospitals, government health centers or clinics, mission institutions, industrial or company institutions, and private institutions. The choice of a given provider may be determined by the perceived quality of its services by consumers of health services. Unfortunately, it is not possible to include quality variables in the current analysis.[3] On the other hand, a variety of factors that affect the accessibility of a provider service include not only prices (fees, waiting time, travel time, and costs) and household income, but also institutional features such as the provision of medical benefits to modern sector employees in industrial and company institutions and demographic-based or other criterion-based exemptions in the public delivery system. These latter factors may have a determining effect on provider choice.

The last five columns of Tables 1.3.1 to 1.3.5 summarize provider choice in the health delivery system by the symptoms perceived by the sick, demographic characteristics, the socioeconomic characteristics of the household, and the geographical areas. Among those who reported an illness, 43 percent sought care at a health institution. Among the 43 percent of sick individuals who sought care at a health institution, 24 percent chose a government clinic or health center; 8 percent, a government hospital; 7 percent, a mission institution; 3 percent, an industrial or company institution; and 2 percent, a private institution. The level of utilization of traditional healers is relatively low (less than 2 percent of sick individuals). In other words, more than half of the sick who seek care in the modern health system use a government health clinic or health center.

The variation in the probability of seeking care from government clinics or health centers is low among socioeconomic groups and geographical areas with few exceptions. Sick individuals from households headed by a parastatal employee have a lower probability of choosing a government health clinic or health center compared to other social groups. In addition, sick individuals from the Copperbelt province have a much lower probability of choosing a government health clinic or health center compared to other provinces.

The probability of choosing a government health clinic or health center is very sensitive to the demographic characteristics of the sick. Among demographic groups, the under 5 years of age and the elderly have the highest probability of utilization of government clinic or health centers: 31 percent of children under 5 years of age and 22 percent of the elderly sought care at these facilities compared to levels below 21 percent among other age groups.

In addition, the probability of choosing a government health center or clinic is sensitive to distance from health centers. Among the population who live within 1 km of health centers, the probability of choosing a government clinic or health center reaches 31 percent; as distance from the health centers increases, however, the probability falls ultimately to 14 percent among populations

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[3]The absence of quality variables from the analysis has implications for the estimation of price effects as pursued in the multivariate analysis of Table Bl.2. If higher quality of health services is positively associated with fees charged by providers and consumers perceived higher prices as reflecting higher quality of services, price effects would be biased upward towards zero. Accordingly, price effects estimated in this analysis are lower bound estimates in absolute terms: they should be interpreted with caution.

who live beyond 10 kms. In contrast, as distance from the nearest hospital increases, the probability that a government health center or clinic is chosen tends to increase, suggesting a substitution between government health center or clinic and hospital.

Only 8 percent of sick individuals chose government hospitals for curative care during the two weeks preceding the survey. The variability of the probability of choosing a government hospital, however, is relatively high. Government hospitals are used mainly by residents of the urban areas: 16 percent of the sick sought care in government hospitals in the urban areas compared to 5 percent in the rural areas. In district centers, province capitals, and the major cities of Lusaka, Ndola, and Kitwe, more than 12 percent of sick individuals sought care at a government hospitals; in other parts of the country, the probability fell below 7 percent.

In addition, segments of the population where the level of education is high have relatively higher levels of utilization of government hospitals: only 6 percent of the sick from households headed by individuals with no schooling sought care in a government hospitals compared to 13 percent among sick individuals from households headed by individuals with at least a secondary level of education. Similarly, households headed by government or private sector employees and higher income groups have relatively higher levels of utilization of government hospital. The probability of choosing a government hospital increases steadily with household income: among the lowest income quintiles, the probability of choosing a government hospital is as low as 5 percent; it reaches 14 percent among individuals from the highest income quintile.

In contrast to the choice of government health facilities, larger differentials are observed for the choice of mission institutions, industrial or company institutions as well as private institutions. These health institutions are mainly used by the better-off segments of the population. Specifically, 33 percent of the sick from households headed by a parastatal employee sought care in a mission institution, compared to 11 percent for the sick from households headed by private sector employee, and below 5 percent for the sick from households headed by a self-employed or government employee.

Similarly, 27 percent of the sick from households headed by a parastatal employee sought care in a industrial or company institution, compared to 7 percent for the sick from households headed by a private sector employee, and below 1 percent for the sick from households headed by a self-employed or government employee.

A preliminary estimation of the effects of fees on the use of alternative provider services suggests that the prevalence of exemptions and prepayment schemes in the public health system has mitigated the effect of fees on the use of government hospitals and health centers.[4] The effect of fees on the use of mission institutions is also very weak. The use of private institutions and industrial or company institutions, however, is very sensitive to fees administered in these institutions. The analysis indicates that a 10 percent increase of fees of private providers would result in an 11 percent decline in the use of their services. Similarly, a 10 percent increase of fees among industrial and company institutions would result in a 9 percent decline of the use of their services.

The data also suggest a consistent pattern of substitution between government hospitals, mission institutions, and private institutions. An increase in fees at mission institutions would result in a slight increase of the use government hospitals and a higher increase in the use of private institutions. Similarly, an increase in private institutions' fees would shift the demand for health

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[4]See note 2.

services toward mission institutions. Finally, a 10 percent increase in government hospital fees would result in an increase of 5 percent of use of private providers services. Understanding of the sensitivity of the demand for alternative providers services will be critical in the formulation and implementation of cost-sharing schemes in the health sector.

4.2   Obstetric Care (Delivery) Behavior

The Zambia Demographic and Health Survey of 1992 (ZDHS 1992) results suggest that maternal care during pregnancy and delivery is a key determinant of child and maternal health in the country.[5] There is a large gap, however, between the coverage of maternal care during pregnancy and maternal care during delivery. First, the ZDHS 1992 reports that coverage of antenatal care is almost universal, with 92 percent pregnant women receiving antenatal care either by doctors or trained nurses or midwives; moreover, the variability of the coverage of antenatal care is low. Second, only 51 percent of deliveries take place at a health facility. The level and the variability of care during delivery is very high. Thus, care during delivery is an issue for health sector reforms and the design of benefits packages under health financing options. Hence, it is interesting to examine who has access to professional obstetric care and from which provider.

Based on the LCMS data and the sample of children born between 1994 and 1996, Tables 2.1.1 to 2.1.3 summarize the coverage of delivery care by provider and among various socioeconomic groups and geographical residence areas.[6] Overall, 55 percent of deliveries take place at home and the remaining 45 percent at health institutions in the modern health delivery system. About 20 percent of deliveries take place at government hospitals and 16 percent at government health centers and clinics: in other words, 36 percent of births take place at government health institutions. Four percent of births are delivered at mission institutions and another 4 percent at industrial and company institutions. Private clinics contribute little to the provision of obstetric care in the country (see Figure 1).

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[5]University of Zambia, Central Statistical Office and Macro International Inc. 1993. *Zambia Demographic and Health Survey 1992.*

[6]It is interesting to compare the ZDHS 1992 results and the LCMS 1996 results relative to the proportion of births by place of delivery: See Table 1 and Figure 1.

	At health facility		At home	
	ZDHS 1992	LCMS 1996	ZDHS 1992	LCMS 1996
Zambia	51	45	49	55
Rural areas	26	26	73	74
Urban areas	79	81	21	19
Selected Provinces				
Eastern	36	27	60	73
Copperbelt	80	75	20	25
Lusaka	76	81	24	21
Southern	34	28	66	72

Table 1

Proportion (%) of Births Delivered by Geographical Areas

Figure 1. ZDHS 1992 and LCMS 1996 Proportion of Births Delivered at Home
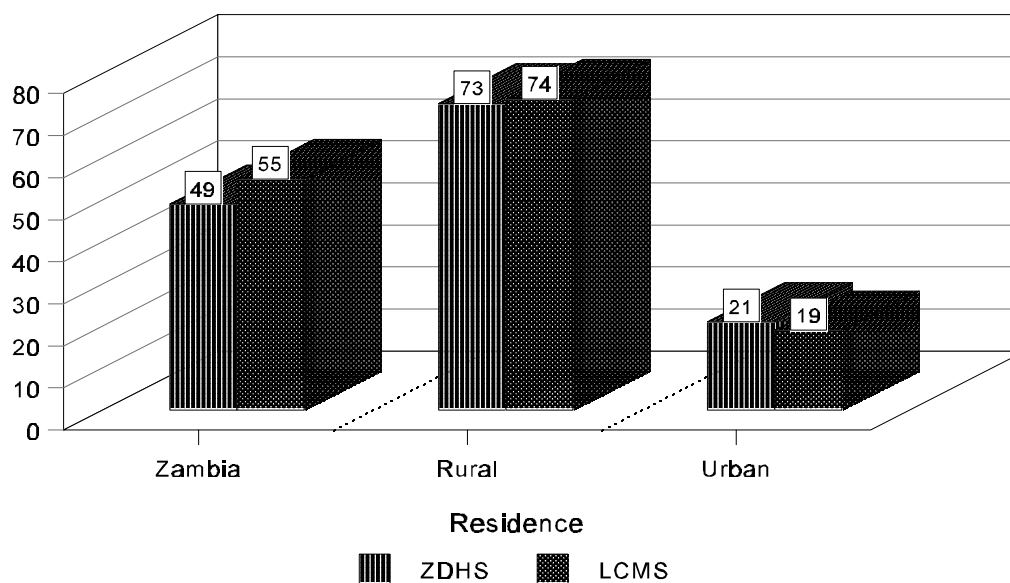
Source: ZDHS and LCMS

Figure 2. Obstetric/Delivery Care

Provider Choice

At Home 55.17

Industrial 4.1

Mission Inst. 4.23

Private 0.42

Govt. Hosp. 20.1

Govt. Clinic 15.69

- At Home
- Govt. Clinic
- Private
- Mission Inst.
- Govt. Hosp.
- Industrial
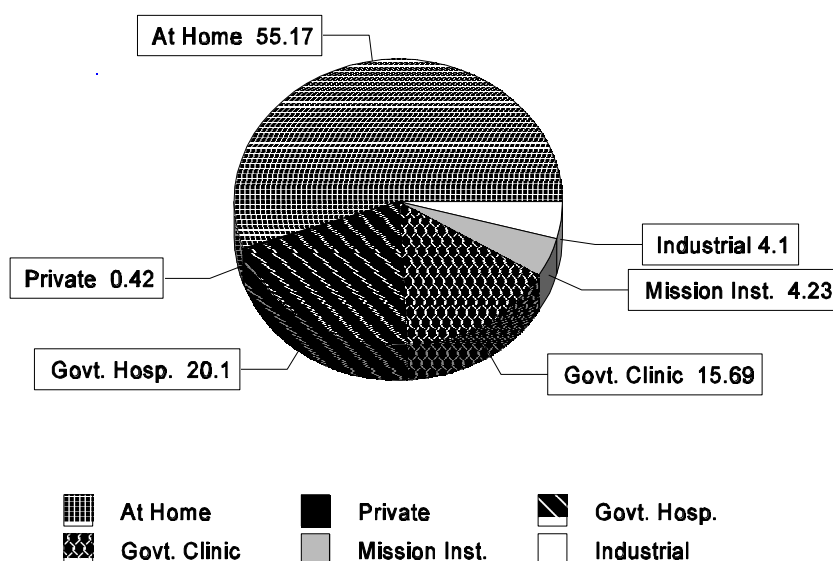
Source: LCMS

The socioeconomic differentials observed relative to provider choice for curative care are also observed for obstetric care. About 75 percent of deliveries from households headed by an individual with no schooling take place at home, compared to 67 percent of deliveries from households headed by an individual with a primary level of education and 32 percent of deliveries from households headed by an individual with at least a secondary level of education. These differentials by education result mainly from the relative access to government health institutions. Only 9 percent of deliveries from households headed by an individual with no schooling take place in government hospitals, compared to 15 percent among households headed by an individual with a primary level of education, and 32 percent among households headed by an individual with at least a secondary level of education. Similarly 8 percent of deliveries from households headed by an individual with no schooling take place in government health centers or clinics, compared to 12 percent among households headed by an individual with a primary level of education, and 23 percent among households headed by an individual with at least a secondary level of education.

Among socioeconomic groups, 67 percent of deliveries from households headed by a self-employed individual take place at home, compared to 25 percent for government employees, 36 percent for private sector employees, and only 13 percent for parastatal employees. At one extreme, only 27 percent of births from households headed by self-employed individuals take place at a government institution: 14 percent at government hospitals and 13 percent at a government health centers and clinics. Among households headed by government employees, 45 percent of birth take place at government hospitals and 20 percent at government health centers or clinics. Among households headed by private sector employees, 32 percent of births take place at government hospitals and 29 percent government health centers or clinics. At the other extreme, 26 percent of

births from households headed by a parastatal employee take place at a government hospital, 19 percent at a government health center or clinic, and 41 percent at industrial and company institutions.

More than 75 percent of deliveries from the poorest 40 percent of households take place at home compared to 22 percent of deliveries from the highest income quintile. The proportion of deliveries that take place at government hospitals is below 10 percent among the poorest 40 percent of households; it reaches more than 30 percent among the richest 40 percent of households. Similarly, the proportion of births that take place at government health centers or clinics is about 10 percent among the poorest 40 percent of households; it reaches 23 percent among the richest 40 percent of households. Only the richest 40 percent of households have access to industrial and company institution obstetric care services.

There are large differentials between geographical areas with respect to the place of delivery. About 74 percent of births take place at home in rural areas compared to 19 percent in urban areas. Only 19 percent of rural births take place in government health institutions compared to nearly 70 percent of urban births. It is noteworthy that 44 percent of urban births take place in government hospitals and 26 percent in government health centers or clinics.

Among provinces, at one extreme 21 percent of births take place at home in the Lusaka province and 25 percent in the Copperbelt province; at the other extreme between 72 and 73 percent of births take place at home in the Eastern and Southern provinces. About 78 percent of deliveries in the Lusaka province take place in government health institutions. Lusaka province is the only province where a proportion as high as 54 percent of births take place in government health centers or clinics, compared to other provinces where the proportion is below 14 percent and is lower than the proportion of births that take place in government hospitals. Copperbelt is the only province where a significant proportion of births are delivered in industrial or company institutions: About 22 percent of deliveries take place in industrial or company institutions.

The single most important variable that accounts for a large portion of the variability of place of delivery of births is distance from health facilities. Under 3 kms from the nearest health center, less than 40 percent of births take place at home; between 3 and 5 kms from the nearest health center, 66 percent of births take place at home; beyond 5 kms from the nearest health center, the proportion of births that take place at home levels up above 75 percent. A similar pattern is observed relative to distance from the nearest hospital. Surprisingly, under 1 km from the nearest health center, 32 percent of births take place in a government hospital compared to 24 percent in a government health center or clinic; while under 5 kms from the nearest hospital, 47 percent of births take place at a government hospital compared to 14 percent at a government health center or clinic.

Lusaka and Copperbelt provinces, where populations are wealthier and urban and health facilities relatively plentiful, stand out from the rest in the proportion of deliveries performed in a health facility. Distance (to a hospital or health center) is an important factor in whether a delivery is done at a health facility. The combination of these findings indicates that the physical availability of facilities (outside of Lusaka and Copperbelt) where obstetric care is available is an important element in increasing the proportion of deliveries performed in a health facility.

5. Prepayment and Exemptions in the Public Health Sector

Until the early 1990s, the major direct contribution of households in health financing was through the purchase of medicine (UNZA/DE and IHE, 1996). Since the introduction of user fees in the public health system and the experimentation with prepayment schemes, household contribution to health financing is undergoing institutional changes under health reforms in Zambia. How households pay for health services, however, may have profound implications relative to sector-wide policy objectives of equity of access and efficiency. The following sections summarize the relative coverage of alternative institutional mechanisms of household contribution to health financing, their articulation to the health delivery system, the prevalence of demographic-based exemptions, and the variability between socioeconomic groups and provinces.

5.1   Prepayment Scheme Coverage

Various options for cost-sharing schemes are being debated in Zambia in an effort to formulate a comprehensive health financing strategy under overall health sector reforms. Which segments of the population are covered under existing schemes is not well documented. Moreover, which types of options, prepayment schemes in particular, could be attractive for different segments of the Zambian population is still under debate. How various segments of the population will be covered under different institutional arrangements for paying for health services, in that these arrangements will determine who have access to what type of services, is central to the issue of distribution of health benefits that the Zambian health reforms will have to face during the coming years. The following paragraphs provide a discussion of the coverage of existing schemes at the national level and the potential of government institutions-based prepayment schemes being experimented with in Copperbelt and Lusaka provinces.

5.2   National Level

Table 3.1.1 and Figure 3 describe the distribution of patients by the type of payment and the health institution used during the two weeks preceding the survey. As a consequence of exemption measures prevailing in the health sector, a large proportion of patients of health institutions do not pay for health services: 43 percent of patients did not pay for their last consultation. The remaining 57 percent, however, paid through mechanisms that vary significantly depending on which providers patients visited.

Overall, 45 percent of patients paid directly at the point of delivery. Among non-government institutions, at one extreme, around 60 percent of patients of mission and private institutions paid directly at the point of delivery. Coverage of prepayment schemes among mission institutions' patients is extremely low. Only 5 percent of industrial and company institutions patients paid directly at the point of delivery. Most patients at these institutions are covered through employer-based arrangements.

Figure 3. Prepayment Schemes

Distribution (%) of Sick Who Sought Care

Paid directly 45.45

Paid by employer 2.13

Prepayment low cost 5.76

Paid partly by other .20

Prepayment high cost 1.28

Paid by other .20

Did not pay 43.09

Prepayment low cost   Paid by employer

Paid directly   Prepayment high cost

Paid by other   Did not pay

Paid partly by other
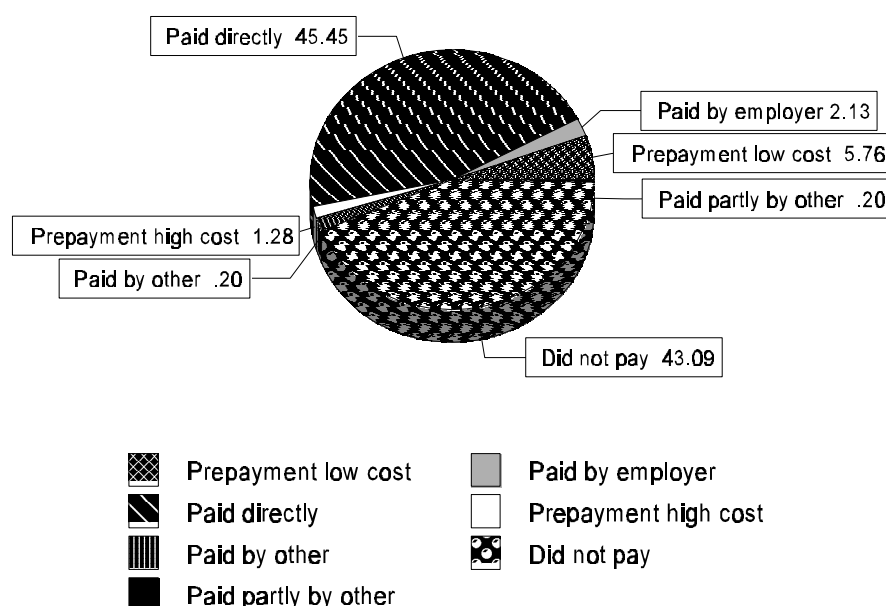
Source: LCMS

Among government institution patients (who represent about 80 percent of health institution patients) the prevalence of direct payment was 46 percent in clinics and health centers and 48 percent in hospitals. About 13 percent of government hospital patients benefit from some type of coverage under voluntary prepayment schemes. At government health centers and clinics, only 6 percent of patients are covered under voluntary prepayment schemes nationally.

Tables 3.1.3a-d describe the distribution of patients by the type of payment and the health institution used among various socioeconomic groups. Use of non-governmental providers made up 28 percent of total use (Table 3.13c). Most members of households headed by self-employed individuals or government employees pay directly for consultations at non-governmental institutions. In contrast, consultations at non-governmental institutions by members of households headed by parastatal employees or private sector employees are paid for under an employer-based arrangement or some other type of third-party arrangement. Finally, coverage of any segment of the population through a voluntary prepayment scheme at non-governmental institutions is very low (4 percent).

These patterns of payments at non-governmental institutions contrast with patterns prevailing at government hospitals, which made up 19 percent of total use (see Table 3.1.3a). The proportion of patients who did not pay for their last consultation at a government hospital does not vary much among socioeconomic groups. Higher percentage participation in prepayment schemes by households headed by parastatal employees (31 percent), private-sector employees (21 percent), and government employees (15 percent), than by the self-employed (10 percent), meant that the former paid directly for government hospital services less frequently. Overall, 12.5 percent of government hospital patients were covered by a prepayment plan. Similar patterns of payments are observed at

government health centers and clinics with a relatively lower coverage of voluntary prepayment schemes, however (see Table 3.1.3b).

Employer-based arrangements cover significant shares of paying patients from households headed by mainly parastatal (29 percent) and private sector (22 percent) employees nationally. These segments of the population, which make up around 15 percent of patients, also have high rates of participation in voluntary prepayment schemes (26 percent of paying patients from these households versus 12 percent of all patients). Since these social groups generally belong to the higher income groups in the country, employer-based arrangements and voluntary prepayment schemes cover mainly high-income groups nationally. Among paying patients in the highest income quintile, 15 percent had some kind of third-party coverage and 48 percent participated in a prepayment scheme. In the next highest quintile, 11 percent had third-party coverage and 17 percent were in a prepayment scheme. In the population as a whole, only 7 percent had third-party coverage and 12 percent were in prepayment plans.

5.3   Copperbelt and Lusaka Provinces

Experimentation with prepayment schemes during the past few years in the Copperbelt and Lusaka provinces provides a distinct pattern of institutional arrangements of household financial contribution in the health sector. Table E3.1.1 provides a summary of the distribution of health institution patients by the type of payment and health institution used in Copperbelt and Lusaka provinces.

Compared to the national level of 43 percent, 39 percent of patients in Copperbelt and Lusaka did not pay for their last consultation. In addition, although 46 percent paid directly nationally, only 34 percent paid directly in Copperbelt and Lusaka. While 2 percent of consultations of patients nationally were paid for under an employer-based arrangements, this proportion reached 5 percent in Copperbelt and Lusaka. Finally, only 7 percent of consultations of patients nationally were covered under a voluntary prepayment scheme; this proportion reached 20 percent in Copperbelt and Lusaka.

Specifically, an important proportion of consultations in private institutions, 16 percent, are paid for under employer-based arrangement in Copperbelt and Lusaka, while about 7 percent of consultations are covered under voluntary prepayment schemes. At government hospitals, 2 percent of consultations are paid for under employer-based arrangements and 36 percent under voluntary prepayment schemes in these two provinces. At government health centers and clinics, coverage of employer-based arrangements is nearly non-existent; however about 21 percent of consultations are paid for under a voluntary prepayment scheme.

Data from Copperbelt and Lusaka provinces suggest that voluntary prepayment schemes organized at government health institutions could change the social polarization revealed at the national level relative to who pays for health services and when (see Table E3.1.3a and E3. l.b). Government hospital patients from households with varying employment status used the prepayment schemes roughly equally. The picture by income group is more complex. The poorest quintile reports not paying for government hospital services at a much higher rate (56 percent) than any other group (range 29–42 percent not paying). Among those who report having to pay, the poorest use the prepayment schemes most frequently (60 percent of the time), followed by the two uppermost quintiles (each 57 percent of the time), with the middle and next-to-lowest quintiles using prepayment 37 percent of the time for government hospital care.

For services at government clinics or health centers (Table 3.1.3b), not paying is distributed relatively evenly across income groups (35 percent of the next-to-lowest reported not paying; the range is 42 to 48 percent not paying for the other quintiles). However, among those who reported that they did have to pay, the upper three income groups used the prepayment schemes much more frequently than the lower two (38–49 percent versus 12 percent of the time).

In summary, government employees and industrial workers in the two provinces are better covered against the financial risks of illness as a consequence of the provision of employment benefits than nationally. Large segments of the population in Copperbelt and Lusaka provinces are participating in the voluntary prepayment schemes in general and in prepayment schemes at the hospital level where financial risks are higher in particular. However, participation in prepayment for non-hospital government care is higher in middle- and upper-income groups. Further analysis of participation in prepayment schemes in these two provinces could inform the design of alternative schemes with a greater potential to cover a large portion of the Zambia population.

5.4   Exemptions

Demographic- and need-based exemptions are key policy issues in Zambia's health system. Demographic-based exemptions are measures implemented in the health sector to promote access to health services of those under 5 years of age and the elderly, under the assumption that these groups have higher needs than other age groups. In other words, these exemption measures are intended to promote categorical equity in the health sector. However, differential patterns of utilization of health services among socioeconomic groups and by distance from health facilities could generate inequities in the distribution of health benefits beyond those addressed by the demographic-based exemptions. The discussion in this section focuses on measuring the prevalence of exemptions from payment in government health facilities, the proportion wrongly denied exemptions, and the proportion wrongly given exemptions.

Among the 700,000 individuals who sought care at a public institution during the two weeks preceding the survey, 41 percent were under 5 years of age, and 2 percent were aged 65 years or above. Excluding patients who have ever been diagnosed with a chronic disease, about 72 percent of children under 5 years of age were correctly exempted from paying at public institutions; 67 percent of patients aged 65 years and above were correctly exempted from paying (see Table 3.2.1). A small proportion of under-5 patients consultations were covered under employer-based arrangements or prepayments schemes. Thus, about 24 percent were wrongly denied exemptions at public health facilities as per current exemption policies.

A high proportion of patients at intermediate ages did not pay at public health facilities: 30 percent among children between 5 and 15 years of age: 16 percent among young adults between 15 and 25 years of age; 22 percent among adults between 25 and 45 years of age; and 28 percent among adults between 45 and 65 years of age. In other words, a significant proportion of patients are being wrongly provided exemptions at public institutions. As the age of the patient is closer to the cutting points of 5 years of age or 65 years of age, the proportion of patients being wrongly provided exemptions at public institutions increases.

Although the proportion of the children under 5 being correctly exempted from paying at public institutions does not vary much between socioeconomic groups, there are large socioeconomic differentials relative to the proportions wrongly granted exemptions. Among patients aged 5 to 14 years who are members of households headed by a self-employed individual, about 31 percent were

exempted from paying; this proportion reaches 33 percent among patients aged 5 to 14 years who are members of households headed by a government employee. In contrast, among patients from households headed by parastatal employee or private sector employee, this proportion declines, respectively, to 15 percent and 21 percent. A similar pattern is observed between the ages of 15 and 65 years. Moreover, the proportions of patients wrongly exempted decline inversely to household income. In other words, in addition to exemptions based on solely on demographic criteria, public health personnel are granting exemptions that benefit not only the poorest segments of the population but also members of households headed by government employees and self-employed individuals.

Overall, however, the demographic-based exemptions are performing fairly well in government institutions in respect to granting exemptions to the eligible age groups or denying waivers to the non-eligible population. The patterns of demographic-based exemptions are quite similar between different socioeconomic groups. The variability of patterns between urban and rural areas, between provinces and between geographical groupings based on centrality is very low, with two exceptions (see Table 3.2.2). The urban elderly report receiving exemptions only 28 percent of the time (73 percent in rural areas). The Lusaka province elderly reported being exempted only 2 percent of the time (versus 67 percent nationally).

Tables 3.2.4 to 3.2.6 describe the distribution of exemptions among socioeconomic groups and location characteristics. About 68.6 percent of exemptions granted to public institutions patients with no reported-diagnosis of chronic illness were given to patients under 5 years of age; 2.5 percent to patients aged 65 or above; and 28.9 percent to patients between the ages of 5 to 65 years (see Figure 4).

Figure 4. Demographic-Based Exemptions/
Public Health Sector
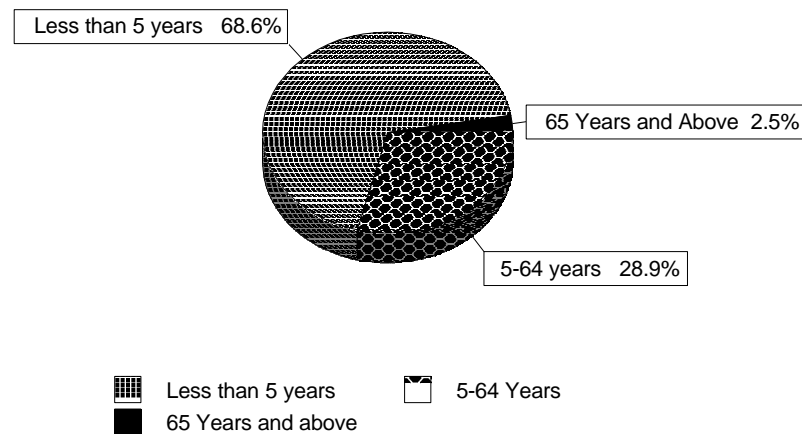
Source: LCMS

Table 2 describes the distribution of public health facilities patients and exemptions granted at public health facilities by income group, rural and urban areas, and distance to the nearest health center. Around 46 percent of exemptions were granted to patients who are members of households among the 40 percent lowest income groups, although patients from these income groups represented 39 percent of all public health facility patients. In contrast, 31 percent of exemptions were granted to patients who are members of households among the 40 percent highest income groups, while patients from these latter income groups represented 38 percent of all public health facility patients. In other words, relative to households' incomes, the distribution of demographic-based exemptions is mildly progressive.

Table 2 Distribution of Government Institutions' Patients and Exemptions					
Income Group	**Distribution of Households (%)**	**Distribution of Patients (%)**		**Distribution of Exemptions (%)**	
			Cumulated		**Cumulated**
Quintile 1	20	18	18	21	21
Quintile 2	20	21	39	25	46
Quintile 3	20	23	62	23	69
Quintile 4	20	21	83	18	81
Quintile 5	20	17	100	13	100
All	100	100	100	100	100
Rural	68	66	66	70	70
Urban	36	34	100	30	100
Distance from the nearest health center					
< 1	23	27	27	28	28
1 - 2	24	30	57	27	55
3 - 4	13	14	71	14	69
5 -9	17	15	86	17	86
10 +	22	14	100	13	100
All	100	100	100	100	100

In addition, 70 percent of exemptions benefited the rural population compared to 30 percent for the urban population. Patients from these residential areas represented, respectively, 66 percent and 34 percent of public health institution patients. Moreover, relative to distance from health centers, 55 percent of exemptions were captured by population groups living within 3 kms from health facilities; 45 percent by population groups living beyond 3 kms from health facilities, closely paralleling population distribution. The demographic-based exemptions are unbiased across geographic areas. Thus, they neither contribute to nor alleviate the barrier to receiving care that distance and rural-ness represent.

In summary, the demographic-based exemptions in government health institutions contributed to categorical equity, and the distribution of medical benefits through these exemption measures is relatively progressive. These exemptions neither address inequalities in the use of services related to income nor to distance to the nearest facility, however. Further discussion of exemptions, however, should consider the trade-off between the health system's capacity to provide demographic based exemptions and the capacity to provide income-based or illness-based exemptions to sustain acceptable quality of services and to extend the coverage to the underserved in remote areas on the other.

6. Household Health-Related Expenditures

To promote equitable access to quality health services, policy decisions on alternative cost-sharing schemes hinge, in part, on the ability and the willingness of households to contribute to the financing of health services. Moreover, differential ability to pay across provinces and districts could be critical in the allocation of public subsidies and the level of resources available to sustain acceptable quality health care broadly. What households pay in a specific environment is an indirect indicator of their ability to pay for health services. The following sections describe how much households spend on health related goods and services and how these expenses vary among socioeconomic groups and among provinces.

6.1 Health-Related Expenditure; Levels and Structure

Overall, Zambian households spend an average of K3,300 per month on health-related goods and services (see Table 4.1.1). Almost 50 percent of these expenses are accounted for by the purchase of drugs (Kl,600). Households spend an average of K450 per month for fees to providers in the modern health sector. A similar average amount of K430 per month is paid as fees to traditional providers by households. Households spend an additional K490 per month for hospital services. Although coverage of prepayment schemes is low in the country, households reported an average contribution of K300 to prepayment schemes during the month preceding the survey. The percentage distribution of the total monthly expenditures among these categories is shown in Figure 5.

Figure 5. Health-Related Expenditure

Percentage Distribution

Drugs 49%

Fees to Mod Provider 14%

Prepayment Schemes 9%

Hospital Services 15%

Fees to Traditional Provider 13%

Legend:
- Drugs
- Fees to Traditional Provider
- Prepayment Schemes
- Fees to Mod Provider
- Hospital Services

Source: LCMS

Alth   ough fees in
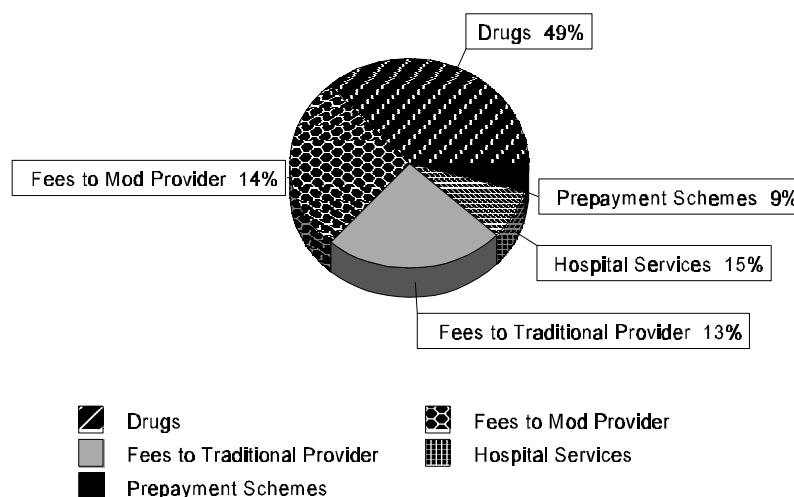
the government health system are among the most contentious issues in the debate over the financial accessibility of health services in Zambia, it is remarkable that fees paid to modern providers represent only 14 percent of household health-related expenses. Households' willingness to pay fees in public health facilities or to participate in prepayment schemes depends on what types and quality of services they receive for their money. In that perspective, the relatively significant amount spent by households on drugs suggests the importance that households assign to pharmaceutical products; consequently, if fees or benefit packages under prepayment schemes do not cover drugs, the willingness of the population to pay for fees or to participate in prepayment schemes could stay relatively low.

6.2   Determinants of Health-Related Expenditures

The variability of household health-related expenditures is relatively large across socioeconomic groups and geographical areas. This large variability results mainly, however, from differences in drug expenses, fees to modern providers, and contributions to prepayment schemes.

Table 4.1.2 describes how household health-related expenditures vary across geographical areas. While rural households spend an average of K1,800 per month, urban households spend an average of K6,300 per month. Besides drugs, fees to traditional healers represent the highest share (20 percent) of health-related expenditures among rural households. Indeed, rural households spend an average of K370 per month as fees to traditional healers, compared to an average of K200 per month as fees to modern providers and K280 for hospital services. In contrast, urban households, in addition to spending an average of K3,300 per month on drugs, spend around Kl,000 per month as fees to modern providers, K900 for hospital expenses and K560 per month as fees to traditional healers. Average contributions to prepayment schemes in urban areas were more than K600 per household during the month preceding the survey.

Geographic differentials in health expenditures are better captured by centrality (nearness to Zambia's largest cities). In the three largest cities of Lusaka, Ndola, and Kitwe, household health-related expenses average around K9,100 per month. Within 50 kms of these three major cities, household spend as much as K6,000 per month on health-related goods and services. Besides provincial capitals, where households spend an average of K4,100 per month, household health-related expenses are below K2,500 per month in the remaining parts of the country.

The level and structure of household health-related expenses differentiate four groups of provinces: (1) Lusaka, (2) Copperbelt, (3) Central and Southern, and (4) other provinces. Monthly household health-related expenses average K8,400 in Lusaka province. More than half of these expenses are accounted for by the purchase of drugs (K4,300). In addition, the level and share of expenditures on fees to modern providers distinguish Lusaka from other provinces; households spent an average of Kl,700 per month as fees to modern providers (21 percent of total). Lusaka households devote the lowest share of their total spending to hospitals (10 percent).

Copperbelt households spend the second-highest amount, an average of K4,100 per month, one-half the amount spent by Lusaka households. Copperbelt and Lusaka households contributed similar amounts to prepayment schemes, but the share (16 percent) spent on prepayment by Copperbelt households is the highest. It is this feature of the structure of household health-related expenses that distinguishes Copperbelt from Central and Southern provinces.

Households spend an average of K4,000 per month in Southern province and K3,100 in Central province. Drugs account respectively for Kl,800 and K2,000 (at 63 percent of total spending, Central province's drug purchases are the biggest share) in these provinces. In the remaining provinces, monthly household health-related expenses average between Kl,200 and Kl,700 with drugs, hospitals, and fees to traditional healers accounting for the largest shares of these expenditures.

Differences between geographical areas reflect the distribution socioeconomic groups with variable ability to pay for health services (see Table 4.1.1). Households in the 40 percent lowest income groups spend an average between Kl,500 and Kl,600 per month. Among households of the 20 percent highest income groups, monthly expenses average K6,400. Households headed by individuals who are self-employed spend an average of K2,500 per month compared to K6,100 by households headed by government employees, K7,500 by households headed by parastatal employees and K4,500 by households headed by private sector employees.

7. Conclusions

The 1996 LCMS data indicate that Zambian households spent an estimated 65 to 70 billion kwacha on health care services. Moreover, this figure does not include some health-related costs, notably transport, since the LCMS did not have any data on these costs. It also does not include amounts spent on treatment abroad. The public expenditure on health in 1996 was 67 billion kwacha. Together the total expenditure on health in the country was more than 130 billion kwacha, or 4 percent of the country's national income.

The above statistics suggest two things: that there already exists in some sense an almost equal sharing of costs between the government and private households and that a large amount of money is spent on health. And yet, the epidemiological profile or the performance on health indicators does not seem to be correlated with such expenditure. We have noted that 25 percent of the Zambian population is sick in any given two-week period, 10 percent are chronically ill, and about 23 percent of the sick individuals go without any treatment either in the form of self-medication or care received from some service provider. Also, average life expectancy of birth is on the decline, and child and maternal mortality are high and on the increase.

The above, in turn, suggests that there is considerable scope to improve the allocative and technical efficiency and cost-effectiveness of health care provisions as well as to improve equity in the administration of the various schemes to ensure access of health care services to everyone.

An interesting conclusion emerging from the regression analysis in this study is that distance to the nearest health facility rather than price in the form of user fees is the significant variable determining access to health services as well as beneficiary schemes, such as the demographic- and disease-based exemptions, and therefore a bigger hurdle posed to equity.

Of course, one obvious reason for price not turning out to be a significant variable would be that qualitative factors have not been taken into account. Understandably, demand need not go down, it can go up, if the higher user fees also mean better services in the sense of prompter attendance by more qualified doctors, less congested and cleaner environment, better supply of drugs, and so on. A lower quality service would then turn out to be a Giffen good vis-a-vis a higher quality service.[7]

This is not to suggest that price has little correlation with demand. Indeed, price has a strong impact within certain categories of health care institutions and in producing intra-institutional substitutions effects. We saw, for instance, that in private institutions, a 10 percent increase in fees does bring about on average an 11 percent contraction in demand. The elasticity of demand, in other words, exceeds unity. Again, a 10 percent increase in the fees charged by government hospitals causes on average a 15 percent extension in demand for the services of private institutions. The cross elasticity of demand is thus very high.

The fact nevertheless remains that whatever the user fee charged at any given institution, the probability of its services being demanded would monotonically diminish with the distance at which

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[7]A Giffen good is a type of good which, over certain ranges of price, reveals a direct relationship between price and quantity, contrary to the law of demand which postulates an inverse relationship between price change and quantity change for a good.

the potential clientele are located. The same goes for availing of exemption benefits. We have noted for instance that the probability of a sick individual located at less than a kilometer distance from the nearest health center, which is 28 percent, comes down to 13 percent when the individual is located at a distance of 10 kms or more. The distance factor would impinge much more in the rural areas where there are more severe shortfalls in transport facilities and fewer all-weather roads. And, given that the incidence of poverty is greater in the rural areas and hence the likelihood of more patients with lower ability to pay, the impact of distance on equity is likely to be greater.

The prepayment schemes introduced in Lusaka and the Copperbelt provinces have attracted a fairly large number of individuals to the scheme and have the potential to change the social differentiation in the access to health care. But the schemes will have to be improved in their design to ensure greater equity in their utilization. At present, the highest income quintile has the highest participation (49 percent) in the scheme for care at government clinics or health centers in the two provinces and the lowest proportion of individuals paying user fees directly out of pocket. On the other hand, less than 12 percent of the sick in the lowest income quintile participate in the clinic/health center scheme and by corollary make the higher contributions to user fees. For services at government hospitals, the situation concerning prepayment differs. The poorest are the most likely to participate, along with the richest, and the poorest pay least frequently of all income groups. Nationally, participation in prepayment schemes is skewed toward the richer, largely because the schemes are available mainly in Copperbelt and Lusaka, the two highest-income provinces.

We have seen that the demographic-based exemptions have contributed to mitigating the inequities of access to health services. Nevertheless, their potential for such mitigation is not fully realized because of significant errors in the administration of exemptions. These errors, already discussed in the previous sections, are summarized in Table 3:

Table 3 Pattern of Exemption Grants		
Age Category	**Granted**	**Not Granted**
<5 years	72%} correct	24%} error in
65 + years	67%} decision	31%} decision
5-15 years	30%}	60%}
15-25 years	16%} error	71%} correct
25-45 years	22%} in	63%} decision
45-65 years	28%} decision	71%}
NB: The above table excludes patients with chronic diseases.		

The financial implications of the errors in the administration of the exemptions cannot be calculated from the available data. How much of potential revenues have not been earned by exempting those who are not eligible for exemptions and how much revenues have been earned wrongly by not exempting those deserving of exemptions? This can make for an interesting area of investigation. But even if there is no net revenue loss, the inequity factor would still remain.

One reason for the prevalence of the above errors is possibly lack of information. A report by Sumaili and Milimo (1996), for instance, says that "many of the people who were over 65 years and were eligible for exemption based on age, expressed ignorance that they were supposed to benefit from this type of exemption. This means that the majority of such people, because they are unlikely to be in formal employment, are likely to simply give up on themselves and await death in their homes instead of rushing to the clinic or hospital with the full knowledge that the clinic will demand a charge which they do not possess" (Pl7). However, instructions to exempt prescribed categories of people from payment have reached clinic and health center levels. But such information apparently has not been sufficiently disseminated to all the potential beneficiaries.

Our report also shows that an important sum of money, 50 percent of the total health expenditures, is spent by households for drugs. There is a possibility that such high expenditures may be partly indicative of self-medication by patients in lieu of seeking institutional care. This may be the result of stock-outs of drugs at health facilities or efforts to economize by avoiding cost-sharing charges.

Our report indicates a limited use (1 percent of the time when ill) of traditional healer institutions, though substantial spending on traditional care (K980 per capita annually) is 13 percent of total spending. Formal surveys of the LCMS type are possibly not the best way to obtain data on the use of traditional medicine and the services of traditional healers.

We have observed that there may be a small increase in the percentage of deliveries, especially in the rural areas, taking place at home (see Table 1). This raises two questions. One, to what extent have user fees, if at all, have contributed to this trend? Two, are these births taking place with the assistance of Traditional Birth Attendants? If not, this could be a factor contributing to the high maternal mortality rates.

To summarize, the following are the main areas of consideration for policy:

- prepayment schemes should be extended to all provinces in the country and ways should be found to encourage lower income groups to increase their participation in them;

- the administration of the exemptions should be improved to ensure their more effective targeting so as to minimize the two-fold errors: providing exemptions to those who do not deserve them and not providing them to those who are deserving;

- the adverse impact of distance to health facilities should be mitigated especially in the rural areas;

- health financing policy should be correlated to drug policy; for instance, using cost-sharing revenues to improve drug availability;

- there is need to improve dissemination of information regarding policy changes particularly among intended beneficiaries; and

- more data gathering and research should be undertaken to provide better information for policy monitoring, evaluation, and changes. Several areas where these could be done include:

△ more reliable information regarding the utilization of traditional healers and medicines;

△ more comprehensive data on health-related costs borne by households, including transportation costs and waiting time (the future LCMS questionnaires can be modified and expanded to achieve this);

△ time series data and analysis to know the sustainability of schemes such as prepayment and exemptions. (At present while there is information at most health institutions, regarding, for instance, the number of members who are on prepayment scheme, there are no records to know the continuity of the membership; that is, one cannot distinguish from any given month's record between new members and continuing members);

△ research regarding the revenue/equity tradeoffs of beneficiary schemes such as the demographic- and disease-based exemptions and health care cost schemes;

△ research regarding the reasons for the apparent increase in deliveries taking place at home; and

△ research regarding a variety issues relating to improvement in allocative and technical efficiency: better correlation of composition and supply levels of drugs with prevailing epidemiological profiles; cost-effective ways to provide an essential package of drugs; optimal levels and utilization of health staff; and appropriate formula for the allocation of resources to district health boards.

Annexes

Annex A: Tables 1.1.1 - 1.3.5

Annex B: Tables B1 - B1.3

Annex C: Tables 2.1.1 - 2.1.3

Annex D: Tables 3.1.1 - 3.2.6

Annex E: Tables 4.1.1 - 4.1.4

Annex F: Tables E1.2.3 - E3.1.4d

Annex A: Tables 1.1.1 - 1.3.5

	Abdominal Pains	Cough/ Cold	Diarrhea without blood	Fever Malaria	Headache	Ever Diagnosed: Chronic Disease
Table 1.1.1 Self-Reported Symptoms Proportion of (%) of sick individuals who reported specific symptoms (the most reported symptoms) in the last two weeks preceding the survey by demographic characteristics (individuals who reported an illness: CSO\LCMS 1996)						
AGE (completed years)						
<5	7.11	29.36	19.55	35.92	7.98	6.08
5-14	10.77	28.59	6.08	30.91	16.13	7.16
15-24	15.70	19.19	5.17	30.19	33.39	9.70
25-44	14.44	21.43	5.18	30.52	33.33	14.53
45-64	11.61	23.98	4.72	26.81	31.99	20.18
65+	7.89	23.31	4.87	20.53	25.96	22.76
SEX						
Male	9.21	25.73	10.79	32.21	17.31	7.93
Female	12.48	25.26	9.54	31.61	22.80	10.69
ALL	10.99	25.64	10.11	31.88	20.31	9.43

Table 1.1.2 Self-Reported Symptoms
Proportion (%) of sick individuals who reported specific symptoms
(the most reported symptoms) in the last two weeks preceding
the survey by socio-economic characteristics of the household
(individuals who reported an illness: CSO\LCMS 1996)

Characteristics of Head of Household (HH)	Abdominal Pains	Cough/ Cold	Diarrhea without blood	Fever/ Malaria	Headache	Ever Diagnosed Chronic Disease	Number of Individuals
SEX OF HEAD OF HOUSEHOLD							
Male	10.71	25.58	10.25	31.90	19.87	8.82	1708606
Female	12.27	28.98	9.30	31.71	22.16	11.90	458398
EDUCATION OF HEAD OF HOUSEHOLD							
No Schooling	11.68	23.82	9.47	29.55	22.81	9.62	377481
Primary	11.51	26.03	9.89	30.16	20.26	8.51	1132719
Secondary +	9.87	26.09	10.66	36.12	19.11	11.04	656804
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD							
Self-employed	11.27	25.77	9.85	30.99	20.87	8.97	1652789
Government employee	9.29	25.94	8.62	35.52	17.53	12.02	171497
Parastatal employee	10.40	28.91	9.74	37.00	16.70	13.01	110815
Private sector employee	11.03	23.16	12.69	32.86	20.49	9.49	231903
INCOME GROUP							
Quintile 1	11.14	26.92	10.24	27.97	20.70	8.26	417599
Quintile 2	12.03	25.71	8.99	30.88	19.83	7.45	519321
Quintile 3	10.38	23.33	9.87	32.98	21.34	8.37	476608
Quintile 4	11.44	25.15	10.34	33.03	19.94	10.65	411171
Quintile 5	9.85	27.94	11.35	35.11	19.85	14.15	342306
ALL	11.04	25.66	10.05	31.86	20.35	9.47	2167004

Table 1.1.3 Self-Reported Symptoms
Proportion (%) of sick individuals who reported specific symptoms
(the most reported symptoms) in the last two weeks preceding
the survey by geographical residence characteristics
(individuals who reported an illness: CSO\LCMS 1996)

	Abdominal Pains	Cough/ Cold	Diarrhea without blood	Fever Malaria	Headache	Ever Diagnosed: Chronic Disease
TYPE OF RESIDENCE						
Rural	11.56	24.59	9.72	30.44	20.62	7.69
Urban	9.62	28.19	11.05	35.36	19.54	13.64
PROVINCE						
Central	10.63	28.15	10.05	28.51	18.39	7.91
Copperbelt	11.01	28.87	9.05	37.73	22.59	11.41
Eastern	11.24	30.49	9.97	30.97	17.59	8.71
Luapala\Northern	12.55	22.20	8.83	32.38	20.26	5.38
Lusaka	9.13	26.74	13.39	32.38	20.11	14.93
North-Western\Western	9.29	20.30	9.87	34.01	19.37	9.77
Southern	11.12	25.01	10.92	26.46	22.70	11.04

ALL	10.99	25.64	10.11	31.88	20.31	9.43

Table 1.2.1 Self-Medication
Proportion (%) of sick individuals who used self-medication only
and average amount they spent on self-medication during the last
two weeks preceding the survey by self-reported symptoms
(individuals who reported an illness: CSO\LCMS 1996)

	Self-Medication Only	Average Self-Medication Expenses (K)
ABDOMINAL PAIN		
No	33.91	665.79
Yes	33.34	783.76
COUGH/COLD		
No	34.48	619.22
Yes	32.02	858.60
DIARRHEA WITHOUT BLOOD		
No	34.39	674.45
Yes	29.04	716.20
FEVER/MALARIA		
No	33.01	687.45
Yes	35.65	659.97
HEADACHE		
No	32.04	681.48
Yes	40.97	667.86
EVER DIAGNOSED: CHRONIC DISEASE		
No	34.41	644.43
Yes	28.48	1052.03
ALL	33.85	678.10

Table 1.2.2 Self-Medication
Proportion (%) of sick individuals who used self-medication only
and average amount they spent on self-medication during the last
two weeks preceding the survey by democratic characteristics
(individuals who reported an illness: CSO\LCMS 1996)

	Self-Medication Only	Average Self-Medication Expenses (K)
AGE (completed years)		
<5	28.45	705.40
5-14	39.06	601.20
15-24	35.67	678.72
25-44	35.53	796.50
45-64	31.76	694.05
65+	30.71	447.72
SEX		
Male	33.66	734.52
Female	34.01	630.71

ALL	33.85	678.10

Table 1.2.3 Self-Medication
Proportion (%) of sick individuals who used self-medication only
and average amount they spent on self-medication during
the last two weeks preceding the survey by socio-economic
characteristics of the household
(individuals who reported an illness: CSO\LCMS 1996)

Characteristics of Head of Household (HH)	Self-Medication Only	Average Self-Medication Expenses (K)
SEX OF HEAD OF HOUSEHOLD		
Male	33.82	715.85
Female	34.33	546.90
EDUCATION OF HEAD OF HOUSEHOLD		
No schooling	33.19	439.29
Primary	34.85	537.63
Secondary +	35.76	1056.52
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD		
Self-employed	34.77	520.91
Government employee	32.31	842.69
Parastatal employee	24.65	1419.30
Private sector employee	33.56	1414.64
INCOME GROUP		
Quintile 1	32.61	346.15
Quintile 2	34.77	292.19
Quintile 3	33.23	565.27
Quintile 4	34.83	950.32
Quintile 5	34.13	1423.45
ALL	33.93	679.63

Table 1.2.4 Self-Medication
Proportion (%) of sick individuals who used self-medication only
and average amount they spent on self-medication during
the last two weeks preceding the survey by
geographical residence characteristics
(individuals who reported an illness: CSO\LCMS 1996)

	Self-Medication Only	Average Self-Medication Expenses (K)
TYPE OF RESIDENCE		
Rural	33.14	448.22
Urban	35.58	1,156.09
PROVINCE		
Central	28.17	805.19
Copperbelt	37.37	1,066.54
Eastern	33.77	384.21
Luapala\Northern	38.32	419.33
Lusaka	32.67	1,390.57
North-Western\Western	31.01	377.22
Southern	29.59	547.43

| | | | | ALL | | 33.85 | | 678.10 | |

Table 1.3.1 Provider Choice
Proportion of (%) of sick individuals who sought care and provider choice
by self-reported symptoms during the last two weeks preceding
the survey by self-reported symptoms
(individuals who reported an illness: CSO\LCMS 1996)

	Did Not Use	Did Use	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial Institution	Private Institution	Traditional Healer
ABDOMINAL PAIN								
No	57.11	42.89	8.30	24.23	6.44	2.47	1.74	.92
Yes	57.23	42.77	6.50	23.28	8.56	2.96	1.79	2.35
COUGH/COLD								
No	57.18	42.82	8.27	23.78	6.54	2.30	1.64	1.28
Yes	56.97	43.03	7.60	25.11	7.07	3.15	2.05	.50
DIARRHEA WITHOUT BLOOD								
No	58.11	41.89	8.03	23.15	6.77	2.59	1.70	1.16
Yes	48.39	51.61	8.76	32.81	5.85	1.95	2.15	.38
FEVER/MALARIA								
No	59.44	40.56	7.72	22.47	6.60	2.58	1.50	1.38
Yes	52.17	47.83	8.90	27.65	6.83	2.39	2.29	.44
HEADACHE								
No	55.22	44.78	8.59	25.19	6.91	2.61	1.85	1.10
Yes	64.58	35.42	6.17	19.94	5.74	2.18	1.34	1.00
EVER DIAGNOSED: CHRONIC DISEASE								
No	58.00	42.00	7.38	24.28	6.33	2.31	1.65	1.01
Yes	48.75	51.25	14.98	22.62	9.93	4.59	2.67	1.70
ALL	57.12	42.88	8.10	24.12	6.67	2.52	1.75	1.08

	Did Not Use	Did Use	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial Institution	Private Institution	Traditional Healer
Table 1.3.2 Provider Choice Proportion of (%) of sick individuals who sought care and provider choice by self-reported symptoms during the last two weeks preceding the survey by demographic characteristics (individuals who reported an illness: CSO\LCMS 1996)								
AGE (completed years)								
<5	47.77	52.23	9.14	31.41	6.61	2.36	1.62	.88
5-14	64.32	35.68	5.70	20.56	6.00	2.77	1.29	.73
15-24	61.27	38.73	8.00	20.82	6.55	2.34	2.12	1.22
25-44	56.42	43.58	10.74	20.25	8.87	3.52	2.65	1.72
45-64	63.20	36.80	6.85	19.89	5.41	.60	1.61	1.34
65+	64.31	35.69	7.58	22.00	5.65	2.01	.49	1.90
SEX								
Male	56.46	43.54	8.77	23.63	7.19	2.67	1.93	1.16
Female	57.67	42.33	7.55	24.53	6.24	2.40	1.60	1.01
ALL	57.12	42.88	8.10	24.12	6.67	2.52	1.75	1.08

Characteristics of the Head of Household (HH)	Did Not Use	Did Use	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial Institution	Private Institution	Traditional Healer
Table 1.3.3 Provider Choice Proportion of (%) of sick individuals who sought care and provider choice by self-reported symptoms during the last two weeks preceding the survey by socio-economic characteristics of the household (individuals who reported an illness: CSO\LCMS 1996)								
SEX OF HEAD OF HOUSEHOLD								
Male	56.15	43.85	8.14	24.37	7.32	3.04	1.82	1.08
Female	60.62	39.38	8.10	23.08	4.34	.57	1.53	1.07
EDUCATION OF HEAD OF HOUSEHOLD								
No Schooling	63.38	36.62	5.65	20.78	5.74	1.56	.92	1.52
Primary	59.27	40.73	6.38	25.24	5.34	1.44	1.07	1.20
Secondary +	49.74	50.26	12.57	24.05	9.55	4.92	3.42	.61
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	59.59	40.41	6.74	24.80	4.48	.46	1.07	1.26
Govt. Employee	47.77	52.23	16.29	24.69	4.88	.71	3.12	.45
Parastatal Employee	40.89	59.11	8.93	17.14	32.64	26.61	5.51	.50
Private Sector Empl.	54.00	46.00	11.58	22.01	11.37	7.00	3.83	.49
INCOME GROUP								
Quintile 1	61.94	38.06	4.49	25.53	3.96	.96	.30	1.17
Quintile 2	62.06	37.94	4.73	24.14	3.93	.07	.82	1.17
Quintile 3	56.64	43.36	8.43	25.22	4.91	.69	1.32	1.13
Quintile 4	53.63	46.37	10.92	24.79	7.66	3.61	2.10	1.28
Quintile 5	48.47	51.53	13.96	19.91	15.50	9.34	5.15	.50
ALL	57.10	42.90	8.13	24.10	6.69	2.52	1.76	1.08

Table 1.3.4 Provider Choice
Proportion of (%) of sick individuals who sought care and provider choice
by self-reported symptoms during the last two weeks preceding
the survey by geographical residence characteristics
(individuals who reported an illness: CSO\LCMS 1996)

	Did Not Use	Did Use	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial Institution	Private Institution	Traditional Healer
TYPE OF RESIDENCE								
Rural	59.10	40.90	4.72	25.40	5.35	1.37	.84	1.32
Urban	52.34	47.66	16.26	21.03	9.86	5.30	3.95	.49
PROVINCE								
Central	53.24	46.76	10.00	30.65	5.35	1.47	2.73	.86
Copperbelt	56.53	43.47	8.97	17.59	13.12	9.59	2.44	.68
Eastern	59.53	40.47	8.89	22.91	4.49	.09	1.68	1.76
Luapala\Northern	63.29	36.71	5.55	21.09	4.57	.74	.38	1.00
Lusaka	52.99	47.01	11.02	27.09	8.07	1.48	5.81	.59
North-Western\Western	54.51	45.49	8.27	27.57	4.68	.35	.22	1.22
Southern	52.75	47.25	7.19	27.94	7.16	4.01	.81	1.29
CENTRALITY								
Lus-Ndo-Kit cities	53.90	46.10	12.03	25.27	8.53	1.82	5.99	.51
Provincial capitals	54.34	45.66	16.99	23.10	5.10	2.11	2.83	.13
District centers	55.12	44.88	12.40	18.48	10.18	7.01	.86	1.09
Lus-Ndo-Kit w 50km	55.94	44.06	7.20	23.07	4.58	.53	3.54	.44
Prov. capitals w 30km	50.52	49.48	6.74	23.39	3.50	–	1.41	1.14
District centers w 30km	57.09	42.91	6.79	23.54	7.64	2.78	.84	1.89
Rail Line w 30km	68.70	31.30	3.10	21.59	4.48	1.02	.64	.78
Remote areas	59.12	40.88	5.03	28.23	4.77	1.02	1.46	.84
ALL	57.12	42.88	8.10	24.12	6.67	2.52	1.75	1.08

Table 1.3.5 Provider Choice
Proportion of (%) of sick individuals who sought care and provider choice
by self-reported symptoms during the last two weeks preceding
the survey by distance from health facilities
(individuals who reported an illness: CSO\LCMS 1996)

	Did Not Use	Did Use	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial Institution	Private Institution	Traditional Healer
DISTANCE TO NEAREST HEALTH CENTER (km)								
<1	45.77	54.23	9.11	30.63	11.27	5.55	3.26	.97
1-2	51.77	48.23	10.16	27.84	7.58	4.19	2.12	.72
3-4	56.70	43.30	8.40	26.57	3.33	.75	.70	.98
5-9	62.98	37.02	5.95	22.54	4.70	.46	.93	1.24
10+	69.78	30.22	6.29	13.51	4.66	.33	1.10	1.52
DISTANCE TO NEAREST HOSPITAL (km)								
<5	52.02	47.98	18.33	14.17	10.77	7.89	2.21	.49
5-9	54.27	45.73	12.37	22.01	8.35	2.52	4.28	.89
10-19	61.13	38.87	5.76	22.81	5.93	1.51	1.77	.87
20-39	58.77	41.23	3.37	27.00	4.46	.43	.87	1.95
40-59	56.00	44.00	3.65	35.04	4.15	.41	.58	1.22
60+	61.50	38.50	2.20	28.91	5.10	.33	1.08	.97

| ALL | 57.12 | 42.88 | 8.10 | 24.12 | 6.67 | 2.52 | 1.75 | 1.08 |

Annex B: Tables B1 - B1.3

Table B1	
List of Independent Variables Used in Multivaried Analyses of Provider Choices: Curative Care	
Independent VariablesI	Variable Label
ABDOMIN1	Reported abdominal pain
COUGH1	Reported cough
DIARRHE1	Reported diarrhea without
FEVER1	Reported fever or malaria
HEADACH1	Reported headache
FGHOSP1	Average fee for government hospital: district level
FGHCEN1	Average fee for government health clinic/center: district level
FMISS1	Average fee for mission institutions: district level
FIND1	Average fee for industrial\company institution: district level
FPRIV1	Average fee for private institution: district level
AGE0_4	Age of the sick is under 5 years
AGE5_14	Age of the sick between 5-14 years
AGE65	Age of the sick 65 years and above
CHRONIC	Sick ever diagnosed with a chronic illness
HFAC05	Distance to Nearest Health Center (km)
HFAC06	Distance to Nearest Hospital (km)
LNINC1	Natural logarithm of household monthly income
LNSIZE	Natural logarithm of household size
HSEX1	Sex of head of household is male
HEDUC1	Highest degree of head of household is primary
HEDUC2	Highest degree of head of household is secondary or above
HEMPGOV	Household head is a Government Employee
HEMPPARA	Household head is a Parastatal Employee
HEMPPRIV	Household head is a Private Sector Employee
CENTRAL	Province of residence is Central
COPPERB	Province of residence is Copperbelt
EASTERN	Province of residence is Eastern
LUSAKA	Province of residence is Lusaka
SOUTHERN	Province of residence is Southern

			Table B1.1 Probability of Entering the Formal Health Delivery System:				
			Logistic Regression Results				
			(All individuals who reported an illness)				

Variable*	B	S.E.	Wald	DF	Sig.	R	Exp(B)
ABDOMIN1	.1001	.0590	2.8781	1	.0898	.0067	1.1053
COUGH1	.0251	.0410	.3750	1	.5403	.0000	1.0254
DIARRHE1	.2581	.0604	18.2667	1	.0000	.0290	1.2945
FEVER1	.3238	.0381	72.1783	1	.0000	.0601	1.3824
HEADACH1	-.2758	.0468	34.6616	1	.0000	-.0410	.7590
FGHOSP1	9.51E-06	6.049E-06	2.4707	1	.1160	.0049	1.0000
FGHCEN1	-.0002	3.216E-05	35.9087	1	.0000	-.0418	.9998
FMISS1	-5.0E-05	1.343E-05	13.7747	1	.0002	-.0246	1.0000
FIND1	1.66E-05	9.413E-06	3.0966	1	.0785	.0075	1.0000
FPRIV1	-2.1E-05	4.815E-06	19.8640	1	.0000	-.0303	1.0000
AGE0_4	.4954	.0442	125.4742	1	.0000	.0798	1.6412
AGE5_14	-.1411	.0464	9.2347	1	.0024	-.0193	.8684
AGE65	-.2426	.1330	3.3284	1	.0681	-.0083	.7846
CHRONIC	.5109	.0571	79.9611	1	.0000	.0634	1.6669
HFAC05	-.0092	.0014	43.1511	1	.0000	-.0461	.9909
HFAC06	-.0011	.0008	2.2358	1	.1348	-.0035	.9989
LNINC1	.0195	.0060	10.5460	1	.0012	.0210	1.0197
LNSIZE	-.0789	.0347	5.1831	1	.0228	-.0128	.9241
HSEX1	.0517	.0461	1.2573	1	.2622	.0000	1.0531
HEDUC1	.0705	.0555	1.6147	1	.2038	.0000	1.0730
HEDUC2	.2755	.0600	21.1087	1	.0000	.0314	1.3172
HEMPGOV	.3076	.0580	28.1441	1	.0000	.0367	1.3601
HEMPPARA	.6932	.0736	88.6106	1	.0000	.0668	2.0001
HEMPPRIV	.0796	.0588	1.8327	1	.1758	.0000	1.0828
CENTRAL	.2471	.0684	13.0461	1	.0003	.0239	1.2803
COPPERB	.3266	.0871	14.0651	1	.0002	.0249	1.3863
EASTERN	.1649	.0633	6.7958	1	.0091	.0157	1.1793
LUSAKA	.8427	.1174	51.5017	1	.0000	.0505	2.3226
SOUTHERN	.0588	.0096	37.7280	1	.0000	.0429	1.0605
Constant	-.7414	.1070	47.9704	1	.0000		

Number of selected cases:		14,450
Number of rejected because of missing data:		265
Number of cases included in the analysis:		14,185

	Chi-Square	DF	Significance
-2Log Likelihood	18,435.617	14,155	.0000
Model Chi-Square	963.637	29	.0000
Improvement	963.637	29	.0000
Goodness of fit	14,197.445	14,155	.0000

*For list and description of variables, see Table B-1.

	Table B1.2 Probability of Choosing a Health Care Provider: Multinomial Regression Results (All individuals who reported an illness)					

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . .   -8452.868
Restricted (Slopes=0) Log-L . . . .   -9670.058
Chi-Squared (80) 2434.382
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
GOVERNMENT HOSPITAL						
ABDOMIN1	-0.15426	0.1307	-1.180	0.23783	0.10350	0.30463
COUGH1	-0.17384	0.8885E-01	-1.956	0.05041	0.26350	0.44056
DIARRHE1	-0.16609E-01	0.1320	-0.126	0.89988	0.10150	0.30201
FEVER1	0.21046E-01	0.8055E-01	0.261	0.79389	0.33500	0.47202
HEADACH1	-0.68694	0.1058	-6.493	0.00000	0.19425	0.39565
FGHOSP1	0.18754E-04	0.1399E-04	1.341	0.18006	4138.0	4372.8
FGHCEN1	-0.23770E-03	0.7811E-04	-3.043	0.00234	866.54	961.32
FMISS1	0.10963E-04	0.3685E-04	0.298	0.76606	2501.7	2691.9
FIND1	-0.54247E-04	0.1896E-04	-2.861	0.00422	5091.0	2234.7
FPRIV1	-0.40444E-04	0.1029E-04	-3.931	0.00008	9417.4	5939.0
AGE0_4	0.10176	0.9099E-01	1.118	0.26339	0.31462	0.46440
AGE5_14	-0.66014	0.1006	-6.560	0.00000	0.25862	0.43791
AGE65	-0.41067	0.2722	-1.509	0.13131	0.20000E-01	0.14001
CHRONIC	0.74393	0.1077	6.904	0.00000	0.10625	0.30818
HFAC05	0.10998E-01	0.1974E-02	5.571	0.00000	-11.760	135.40
HFAC06	-0.41482E-01	0.2760E-02	-15.027	0.00000	3.8586	139.34
LNINC1	0.28570E-01	0.3385E-02	8.441	0.00000	-8.5405	135.56
LNSIZE	0.23839E-02	0.9380E-03	2.541	0.01104	-15.526	130.31
HSEX1	-0.39033	0.9250E-01	-4.220	0.00002	0.77538	0.41736
HEDUC1	-0.39534	0.1140	-3.468	0.00052	0.44688	0.49720
HEDUC2	0.19559	0.1206	1.621	0.10492	0.39237	0.48831
HEMPGOV	0.25773	0.1082	2.382	0.01724	0.12337	0.32889
HEMPPARA	0.66003E-01	0.1649	0.400	0.68890	0.80375E-01	0.27189
HEMPPRIV	0.11126	0.1211	0.918	0.35838	0.11875	0.32351
CENTRAL	-0.61328E-01	0.1517	-0.404	0.68608	0.85750E-01	0.28001
COPPERB	-0.14779	0.1897	-0.779	0.43599	0.16637	0.37244
EASTERN	0.59384E-01	0.1410	0.421	0.67360	0.11613	0.32039
LUSAKA	0.69955E-01	0.3103	-0.225	0.82163	0.16850	0.37433
SOUTHERN	0.30636E-01	0.2136E-01	1.435	0.15141	0.92312	2.3686

(Continued)

	Table B1.2 Probability of Choosing a Health Care Provider: Multinomial Regression Results (All individuals who reported an illness)					

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood .... -8452.868
Restricted (Slopes=0) Log-L .... -9670.058
Chi-Squared (80) 2434.382
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
GOVERNMENT HEALTH CLINIC/CENTER						
ABDOMIN1	-0.36329E-01	0.9628E-01	-0.377	0.70594	0.10350	0.30463
COUGH1	-0.82011E-01	0.6638E-01	-1.235	0.21667	0.26350	0.44056
DIARRHE1	0.23950	0.9240E-01	2.592	0.00954	0.10150	0.30201
FEVER1	0.18189	0.6098E-01	2.983	0.00286	0.33500	0.47202
HEADACH1	-0.48523	0.7715E-01	-6.290	0.00000	0.19425	0.39565
FGHOSP1	0.56683E-04	0.9860E-05	5.749	0.00000	4138.0	4372.8
FGHCEN1	-0.36217E-03	0.5770E-04	-6.277	0.00000	866.54	961.32
FMISS1	-0.32562E-04	0.2072E-04	-1.572	0.11605	2501.7	2691.9
FIND1	-0.64212E-04	0.1425E-04	-4.507	0.00001	5091.0	2234.7
FPRIV1	-0.83994E-04	0.7803E-05	-10.765	0.00000	9417.4	5939.0
AGE0_4	0.33374	0.7004E-01	4.765	0.00000	0.31462	0.46440
AGE5_14	-0.33538	0.7285E-01	-4.604	0.00000	0.25862	0.43791
AGE65	-0.53189	0.2218	-2.398	0.01650	0.20000E-01	0.14001
CHRONIC	0.56277E-01	0.9978E-01	0.564	0.57276	0.10625	0.30818
HFAC05	-0.50491E-01	0.4361E-02	-11.576	0.00000	-11.760	135.40
HFAC06	0.92387E-02	0.1110E-02	8.325	0.00000	3.8586	139.34
LNINC1	0.39746E-01	0.4252E-02	9.347	0.00000	-8.5405	135.56
LNSIZE	0.12038E-02	0.9890E-03	1.217	0.22354	-15.526	130.31
HSEX1	-0.30191	0.6987E-01	-4.321	0.00002	0.77538	0.41736
HEDUC1	-0.30640	0.8118E-01	-3.774	0.00016	0.44688	0.49720
HEDUC2	-0.34070	0.9270E-01	-3.675	0.00024	0.39237	0.48831
HEMPGOV	-0.62411E-01	0.9757E-01	-0.640	0.52239	0.12337	0.32889
HEMPPARA	-0.30637E-01	0.1363	-0.225	0.82212	0.80375E-01	0.27189
HEMPPRIV	0.13292E-01	0.9841E-01	0.135	0.89255	0.11875	0.32351
CENTRAL	0.37350	0.1045	3.574	0.00035	0.85750E-01	0.28001
COPPERB	1.0052	0.1412	7.121	0.00000	0.16637	0.37244
EASTERN	0.19934	0.1023	1.949	0.05128	0.11613	0.32039
LUSAKA	1.3464	0.1866	7.214	0.00000	0.16850	0.37433
SOUTHERN	0.10733	0.1501E-01	7.151	0.00000	0.92312	2.3686

(Continued)

Table B1.2 Probability of Choosing a Health Care Provider: Multinomial Regression Results (All individuals who reported an illness)

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . . -8452.868
Restricted (Slopes=0) Log-L . . . . -9670.058
Chi-Squared (80) 2434.382
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
MISSION INSTITUTION						
ABDOMIN1	-0.67947E-01	0.2247	-0.302	0.76240	0.10350	0.30463
COUGH1	-0.30427	0.1681	-1.810	0.07025	0.26350	0.44056
DIARRHE1	0.68794E-01	0.2264	0.304	0.76119	0.10150	0.30201
FEVER1	-021678	0.1515	-1.431	0.15253	0.33500	0.47202
HEADACH1	-0.48409	0.1864	-2.597	0.00941	0.19425	0.39565
FGHOSP1	0.17781E-04	0.3331E-04	0.534	0.59351	4138.0	4372.8
FGHCEN1	-0.24401E-02	0.3663E-03	-6.662	0.00000	866.54	961.32
FMISS1	-0.58538E-04	0.6457E-04	-0.907	0.36461	2501.7	2691.9
FIND1	-0.94634E-04	0.3332E-04	-2.840	0.00451	5091.0	2234.7
FPRIV1	0.29886E-04	0.746E-04	1.711	0.08701	9417.4	5939.0
AGE0_4	0.40671	0.1610	2.526	0.01154	0.31462	0.46440
AGE5_14	-0.50644	0.1810	-2.797	0.00515	0.25862	0.43791
AGE65	-13.144	212.2	-0.062	0.95062	0.20000E-01	0.14001
CHRONIC	0.64982	0.2080	3.124	0.00178	0.10625	0.30818
HFAC05	0.14489E-02	0.3750E-02	0.386	0.69923	-11.760	135040
HFAC06	-0.27537E-01	0.3695E-02	-7.453	0.00000	3.8586	139.34
LNINC1	0.27288E-01	0.7845E-02	3.479	0.00050	-8.5405	135.56
LNSIZE	-0.35866E-03	0.6414E-02	-0.056	0.95541	-15.526	130.31
HSEX1	-0.86978E-01	0.1603	-0.543	0.58747	0.77538	0.41736
HEDUC1	-0.89450	0.1731	-5.169	0.00000	0.44688	0.49720
HEDUC2	-0.55995	0.2035	-2.751	0.00594	0.39237	0.48831
HEMPGOV	-1.3652	0.3086	-4.424	0.00001	0.12337	0.32889
HEMPPARA	-2.2670	1.014	-2.235	0.02540	0.80375E-01	0.27189
HEMPPRIV	-0.65541	0.2985	-2.195	0.02814	0.11875	0.32351
CENTRAL	-1.0499	0.4374	-2.400	0.01639	0.85750E-01	0.28001
COPPERB	-0.31433	0.3526	-0.891	0.37270	0.16637	0.37244
EASTERN	-0.34839	0.2300	-1.515	0.12975	0.11613	0.32039
LUSAKA	1.4751	0.3704	3.982	0.00007	0.16850	0.37433
SOUTHERN	-0.40901E-01	0.3867E-01	-1.058	0.29016	0.92312	2.3686

	Table B1.2 Probability of Choosing a Health Care Provider: Multinomial Regression Results (All individuals who reported an illness)					

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . .   -8452.868
Restricted (Slopes=0) Log-L . . . .   -9670.058
Chi-Squared (80) 2434.382
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
INDUSTRIAL/COMPANY INSTITUTION						
ABDOMIN1	-0.69428	0.2678	-2.592	0.00954	0.10350	0.30463
COUGH1	-0.19857	0.1614	-1.230	0.21863	0.26350	0.44056
DIARRHE1	-0.73787	0.2881	-2.561	0.01043	0.10150	0.30201
FEVER1	-0.47850	0.1558	-3.071	0.00214	0.33500	0.47202
HEADACH1	-1.2523	0.2206	-5.677	0.00000	0.19425	0.39565
FGHOSP1	-0.27789E-04	0.2240E-04	-1.240	0.21480	4138.0	4372.8
FGHCEN1	-0.89337E-04	0.7599E-04	-1.176	0.23973	866.54	961.32
FMISS1	-0.16910E-03	0.6853E-04	-2.467	0.01361	2501.7	2691.9
FIND1	-0.21361E-03	0.2774E-04	-7.701	0.00000	5091.0	2234.7
FPRIV1	-0.35041E-05	0.1838E-04	-0.191	0.84877	9417.4	5939.0
AGE0_4	0.10074	0.1728	0.583	0.55996	0.31462	0.46440
AGE5_14	-0.64989	0.1798	-3.614	0.00030	0.25862	0.43791
AGE65	-0.24055	0.5419	-0.444	0.65709	0.20000E-01	0.14001
CHRONIC	0.41121	0.2139	1.923	0.05451	0.10625	0.30818
HFAC05	-0.15536E-01	0.9683E-02	-1.604	0.10862	-11.760	135.40
HFAC06	-0.28119E-01	0.5799E-02	-4.849	0.00000	3.8586	139.34
LNINC1	0.42197E-01	0.1038E-01	4.065	0.00005	-8.5405	135.56
LNSIZE	0.17657E-02	0.2118E-02	0.834	0.40442	-15.526	130.31
HSEX1	-0.89154	0.1864	-4.784	0.00000	0.77538	0.41736
HEDUC1	-1.5636	0.2183	-7.162	0.00000	0.44688	0.49720
HEDUC2	-0.85741	0.2023	-4.239	0.00002	0.39237	0.48831
HEMPGOV	-0.83117	0.4174	-1.991	0.04644	0.12337	0.32889
HEMPPARA	3.3608	0.2281	14.731	0.00000	0.80375E-01	0.27189
HEMPPRIV	0.96744	0.2640	3.664	0.00025	0.11875	0.32351
CENTRAL	-0.51358	0.3382	-1.518	0.12890	0.85750E-01	0.28001
COPPERB	0.75646	0.3186	2.374	0.01757	0.16637	0.37244
EASTERN	-3.0640	1.025	-2.989	0.00280	0.11613	0.32039
LUSAKA	0.30606	0.5084	0.602	0.54717	0.16850	0.37433
SOUTHERN	-0.31405E-03	0.4603E-01	-0.007	099456	0.92312	2.3686

(Continued)

	Table B1.2 Probability of Choosing a Health Care Provider: Multinomial Regression Results (All individuals who reported an illness)					

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . . -8452.868
Restricted (Slopes=0) Log-L . . . . -9670.058
Chi-Squared (80) 2434.382
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
PRIVATE INSTITUTION						
ABDOMIN1	-0.13147	0.2419	-0.543	0.58684	0.10350	0.30463
COUGH1	-0.17983	0.1718	-1.047	0.29509	0.26350	0.44056
DIARRHE1	-0.48236	0.2786	-1.731	0.08340	0.10150	0.30201
FEVER1	-0.13185	0.1586	-0.831	0.40585	0.33500	0.47202
HEADACH1	-0.88592	0.2069	-4.282	0.00002	0.19425	0.39565
FGHOSP1	0.12335E-03	0.2497E-04	4.940	0.00000	4138.0	4372.8
FGHCEN1	-0.38051E-03	0.9662E-04	-3.938	0.00008	866.54	961.32
FMISS1	0.13635E-03	0.7477E-04	1.823	0.06823	2501.7	2691.9
FIND1	-0.17520E-03	0.3630E-04	-4.827	0.00000	5091.0	2234.7
FPRIV1	-0.14000E-03	0.2573E-04	-5.442	0.00000	9417.4	5939.0
AGEO_4	-0.17932	0.1766	-1.015	0.30989	0.31462	0.46440
AGES_14	-1.0450	0.2057	-5.082	0.00000	0.25862	0.43791
AGE65	-1.8853	1.016	-1.856	0.06344	0.20000E-01	0.14001
CHRONIC	0.78417E-01	0.2249	0.349	0.72739	0.10625	0.30818
HFAC05	-0.75247E-02	0.7672E-02	-0.981	0.32668	-11.760	135.40
HFAC06	-0.26393E-01	0.4615E-02	-5.719	0.00000	3.8586	139.34
LNINC1	0.34210E-01	0.8854E-02	3.864	0.00011	-8.5405	135.56
LNSIZE	0.14499E-02	0.3998E-02	0.363	0.71685	-15.526	130.31
HSEX1	-0.65585	0.1692	-3.876	0.00011	0.77538	0.41736
HEDUC1	-1.4183	0.2123	-6.682	0.00000	0.44688	0.49720
HEDUC2	-0.63820	0.2065	-3.090	0.00200	0.39237	0.48831
HEMPGOV	-0.71917	0.2792	-2.576	0.01000	0.12337	0.32889
HEMPPARA	0.74810	0.2373	3.153	0.00162	0.80375E-01	0.27189
HEMPPRIV	0.22619	0.2083	1.086	0.27753	0.11875	0.32351
CENTRAL	0.75355E-01	0.2994	0.252	0.80128	0.85750E-01	0.28001
COPPERB	1.5610	0.3777	4.133	0.00004	0.16637	0.37244
EASTERN	0.16619	0.3082	0.539	0.58968	0.11613	0.32039
LUSAKA	0.91255	0.5915	1.543	0.12290	0.16850	0.37433
SOUTHERN	-0.19984E-01	0.5685E-01	-0.352	0.72517	0.92312	2.3686

*For list and description of variables, see Table B-1.

X-Variable	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial/ Comp. Institution	Private Institution
Table B1.3 — Estimates of Marginal Effects of Provider Fees on the Choice of Provider					
Use percent	0,081	0,2412	0,0667	0,0252	0,0175
PARAMETER ESTIMATES					
b-fghosp	0,000018754	0,000056683	0,000017781	-0,000027789	0,00012335
b-fghcen	-0,0002377	-0,00036217	-0,0024401	-0,000089337	-0,00038051
b-fmiss	0,000010963	-0,000032562	-0,000058538	-0,0001691	0,00013635
b-find	-0,000054247	-0,000064212	-0,000094634	-0,00021361	-0,0001752
b-fprivate	-0,000040444	-0,000083994	0,000029886	-0,0000035041	-0,00014
MARGINAL EFFECTS = PRICE ELASTICITIES					
fghosp	0,00380137991	0,16075158191	-0,0002248941	-0,18879355409	0,43661962791
fghcen	0,03515898651	-0,0726992473	-1,8733087095	0,163721460528	-0,0885915909
fmiss	0,05931188217	-0,0495746103	-0,1145587695	-0,39115172493	0,37299254007
find	-0,0998039579	-0,1505357729	-0,3054141749	-0,91112099089	-0,7155756809
fprivate	-0,1541042249	-0,5642319949	0,50822151714	0,193773589404	-1,0916628993

Annex C: Tables 2.1.1 - 2.1.3

Characteristics of the Head of Household (HH)	Govern-ment Hospital	Govern-ment Clinic\H Center	Mission Institution	Industrial Institution	Private Institution	At Home	All	Number of Children
Table 2.1.1 Obstetric/Delivery Care: Provider Choice Distribution (%) of births who are still alive by institution (place) of delivery and socio-economic characteristics of the household (Individuals born in 1994-1996: CSO\LCMS 1996)								
SEX OF HEAD OF HOUSEHOLD								
Male	20.37	15.55	4.35	4.53	.49	54.43	100.00	425806
Female	18.57	16.50	3.53	1.65	–	59.42	100.00	74565
EDUCATION OF HEAD OF HOUSEHOLD								
No Schooling	9.15	8.30	3.63	4.02		74.89	100.00	57671
Primary	14.54	12.43	4.11	1.36	.17	66.85	100.00	259800
Secondary +	31.45	22.67	4.59	8.01	.91	32.37	100.00	182899
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	13.94	12.45	40.40	1.47	.35	66.99	100.00	352337
Government Employee	44.64	20.18	7.85	.73	1.18	25.36	100.00	50645
Parastatal Employee	26.03	19.03	.71	41.40	.33	12.50	100.00	34991
Private Sector Employee	31.62	28.53	2.28	.77	.21	36.60	100.00	62398
INCOME GROUP								
Quintile 1	8.26	9.92	5.54	1.28	.50	74.24	100.00	88144
Quintile 2	9.14	9.70	4.34	.18	–	76.54	100.00	117877
Quintile 3	18.23	13.91	4.43	2.78	.54	59.29	100.00	113103
Quintile 4	31.37	23.82	4.31	3.94	.80	35.59	100.00	99397
Quintile 5	37.53	23.15	2.28	14.78	.30	21.96	100.00	81850
ALL	20.10	15.69	4.23	4.10	.42	55.17	100.00	500371

Table 2.1.2 Obstetric/Delivery Care: Provider Choice
Distribution (%) of births who are still alive by institution (place) of delivery and geographical residence characteristics
(Individuals born in 1994-1996: CSO\LCMS 1996)

Characteristics of the Head of Household (HH)	Govern- ment Hospital	Govern- ment Clinic\H Center	Mission Institution	Industrial Institution	Private Institution	At Home	All	Number of Children
TYPE OF RESIDENCE								
Rural	7.92	10.58	5.55	1.32	.28	73.97	100.00	329929
Urban	43.67	25.60	1.68	9.48	.69	18.79	100.00	170442
PROVINCE								
Central	29.85	10.13	.54	2.08	–	56.93	100.00	49039
Copperbelt	37.52	8.19	4.75	22.18	1.94	25.39	100.00	78688
Eastern	12.33	9.26	4.83	.05	.05	73.31	100.00	85516
Luapala\Northern	12.08	10.77	5.66	1.51	.19	69.28	100.00	103233
Lusaka	22.39	54.22	1.70	.32	.44	20.75	100.00	65966
North-Western\Western	15.10	14.15	8.37	.21	–	61.83	100.00	46181
Southern	16.23	8.06	3.07	.16	.05	72.09	100.00	71748
CENTRALITY								
Lus-Ndo-Kit cities	26.06	58.96	.49	.40	.10	13.99	100.00	52913
Provincial capitals	52.31	8.70	1.29	4.25	.12	33.34	100.00	34871
District centers	27.84	12.57	5.54	14.74	.87	37.80	100.00	82485
Lus-Ndo-Kit w 50km	16.06	21.14	9.95	4.47	1.01	46.90	100.00	23751
Prov. capitals w 30km	6.08	13.74	8.89	–	–	71.29	100.00	23984
District centers w 30km	9.52	9.15	2.82	2.04	.03	76.23	100.00	114860
Rail Line w 30km	12.81	16.03	3.54	–	–	66.61	100.00	22522
Remote areas	18.26	7.93	5.07	2.25	.69	65.58	100.00	144986
ALL	20.10	15.69	4.23	4.10	.42	55.17	100.00	500371

Table 2.1.3 Obstetric/Delivery Care: Provider Choice
Distribution (%) of births who are still alive by institution (place) of delivery and distance from health facilities
(Individuals born in 1994-1996: CSO\LCMS 1996)

	Government Hospital	Government Clinic\H Center	Mission Institution	Industrial Institution	Private Institution	At Home	All	Number of Children
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	32.26	23.74	2.22	10.30	.31	31.05	100.00	120339
1-2	26.79	26.38	2.68	4.48	.60	38.49	100.00	119509
3-4	13.99	11.06	6.88	1.21	.14	66.36	100.00	65552
5-9	11.18	6.67	4.79	1.53	.04	75.64	100.00	94283
10+	9.96	4.86	6.22	.51	.87	77.36	100.00	100687
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	47.12	14.43	5.81	11.36	1.01	20.24	100.00	116571
5-9	29.93	27.23	3.49	3.28	–	36.08	100.00	69898
10-19	12.90	21.80	3.20	6.43	–	55.27	100.00	60649
20-39	7.55	10.01	5.85	.71	.42	75.00	100.00	113276
40-59	5.16	16.16	1.68	–	.46	76.54	100.00	52000
60+	6.43	11.04	2.85	.30	.23	78.42	100.00	87977

ALL	20.10	15.69	4.23	4.10	.42	55.17	100.00	500371

Annex D: Tables 3.1.1 - 3.2.6

Table 3.1.1 Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and health institution used during the last two weeks preceding the survey (Individuals who sought care in a health institution: CSO\LCMS 1996)								
	Prepayment LC[1]	Prepayment HC[2]	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
HEALTH INSTITUTION								
Govt. Hospital	10.98	2.45	.97	.90	.10	47.98	36.48	177162
Govt. Clinic/H. Center	5.12	.94	.09	.19	.12	46.26	47.29	527642
Mission Institution	2.37	.37	.85	.80	.05	60.99	34.39	84069
Industrial Institution	4.87	2.38	24.47	19.37	1.75	5.09	42.07	55134
Private Institution	5.55	2.09	9.37	2.36	–	59.68	20.67	38240
Traditional Healer	–	–	–	5.57	.42	55.59	37.25	23584
Other	2.47	.82	–	1.10	–	23.39	72.21	28993
HEALTH INSTITUTION								
Govt. Hospital	10.98	2.45	.97	.90	.10	47.98	36.48	177162
Govt. Clinic/H. Center	5.12	.94	.09	.19	.12	46.26	47.29	527642
Other	3.27	1.16	7.73	6.03	.48	42.08	39.01	230020
ALL	5.76	1.28	2.13	1.76	.20	45.45	43.09	937843

[1]LC: Low Cost
[2]HC: High Cost

Table 3.1.2a Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and health institution and demographic characteristics of the patient (Individuals who sought care in a health institution: CSO\LCMS 1996)								
Health Institution Government Hospital Patients								
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	5.03	2.58	1.19	.80	.06	25.69	64.50	65822
5-14	9.46	2.54	.68	–	.39	68.43	18.49	32058
15-24	16.88	1.82	.60	–	–	62.34	18.34	33386
25-44	20.71	2.88	1.06	2.50	–	56.12	16.30	33644
45-64	3.94	3.04	2.15	2.81	–	53.61	34.45	8023
65+	4.45	–	–	–	–	51.21	44.35	4229
SEX								
Male	11.87	2.09	1.37	.44	.05	46.69	37.36	87014
Female	10.12	2.79	.59	1.35	.14	49.23	35.62	90148

ALL	10.98	2.45	.97	.90	.10	47.98	36.48	177162

Table 3.1.2b Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and demographic characteristics of the patient
(Individuals who sought care in a health institution: CSO\LCMS 1996)

Health Institution
Government Clinic/Health Center

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	2.62	1.16	.06	.22	.06	23.51	72.36	226172
5-14	5.86	.36	–	.09	.29	59.50	33.91	115593
15-24	9.50	1.66	.11	.07	–	70.77	17.89	86893
25-44	8.10	.74	.17	.42	.24	63.43	26.90	63402
45-64	3.50	.08	–	–	–	71.16	25.26	23305
65+	.86	–	1.08	.39	–	31.26	66.41	12278
SEX								
Male	4.72	.86	.15	.04	.13	45.98	48.12	234595
Female	5.44	1.01	.04	.30	.11	46.48	46.62	293047
ALL	5.12	.94	.09	.19	.12	46.26	47.29	527642

Table 3.1.2c Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and demographic characteristics of the patient
(Individuals who sought care in a health institution: CSO\LCMS 1996)

Health Institution
Other

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	2.66	1.51	6.41	2.10	.71	35.35	51.06	82873
5-14	4.42	.57	7.20	13.40	.08	39.44	34.90	52524
15-24	3.21	1.61	8.26	7.05	–	49.69	29.93	40983
25-44	3.59	1.17	10.40	4.98	1.23	46.81	31.10	38510
45-64	2.49	–	8.51	1.00	–	63.07	24.93	11717
65+	–	–	9.02	5.27	–	29.28	56.43	3414
SEX								
Male	3.62	1.35	10.69	3.55	.64	41.24	38.56	109494
Female	2.95	.98	5.05	8.29	.34	42.84	39.42	120526
ALL	3.27	1.16	7.73	6.03	.48	42.08	39.01	230020

Table 3.1.2d Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and demographic characteristics of the patient
(Individuals who sought care in a health institution: CSO\LCMS 1996)

Health Institution All							
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All

AGE (COMPLETED YEARS)

< 5	3.04	1.48	1.66	.74	.21	26.42	66.13	376102
5-14	6.04	.76	1.99	3.56	.25	55.55	31.63	200603
15-24	9.41	1.68	2.28	1.82	–	63.52	20.99	161635
25-44	9.88	1.39	3.27	2.22	.46	56.82	25.29	136468
45-64	3.30	.61	2.71	.79	–	65.58	26.84	43113
65+	1.47	–	2.21	1.14	–	35.15	60.02	19921

SEX

Male	5.87	1.23	3.06	1.01	.24	44.80	43.41	432206
Female	5.66	1.32	1.33	2.39	.17	46.01	42.82	505637
ALL	5.76	1.28	2.13	1.76	.20	45.45	43.09	937843

Table 3.1.3a Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and socio-economic characteristics of the household
(Individuals who sought care in a health institution: CSO\LCMS 1996)

GOVERNMENT HOSPITAL PATIENTS							
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals

SEX OF HEAD OF HOUSEHOLD

Male	12.41	2.64	1.05	.60	.12	45.93	37.07	139015
Female	5.91	1.79	.73	1.96	–	56.01	33.60	37146

EDUCATION OF HEAD OF HOUSEHOLD

No Schooling	4.92	1.19	–	–	.59	53.73	39.58	21322
Primary	9.47	1.18	.63	1.14	–	51.42	36.16	72307
Secondary +	14.00	3.91	1.54	.89	.05	43.65	35.65	82532

EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD

Self-Employed	8.10	1.45	.09	1.26	.11	52.93	35.96	111471
Government Employee	11.61	3.54	4.24	.35	–	41.82	38.40	27936
Parastatal Employee	24.02	7.24	.74	.57	–	32.69	33.37	9895
Private Sector Employee	17.87	3.78	1.38	–	.16	39.99	36.83	26860

INCOME GROUP

Quintile 1	2.35	1.83	–	2.68	–	47.59	45.55	18764
Quintile 2	2.28	.43	.75	–	–	59.68	36.86	24539
Quintile 3	5.68	.29	.76	.78	.10	51.95	40.44	40198
Quintile 4	17.23	1.79	.65	.76	–	46.61	32.97	44880
Quintile 5	17.65	6.21	1.98	.85	.26	40.36	32.16	47782

ALL	11.04	2.46	.98	.89	.10	48.06	36.34	176161

Table 3.1.3b Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and socio-economic characteristics of the household
(Individuals who sought care in a health institution: CSO\LCMS 1996)

GOVERNMENT CLINIC OR HEALTH CENTER

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	5.56	.98	.09	.14	.12	45.19	47.92	416466
Female	3.54	.69	.10	.38	.14	50.80	44.36	105814
EDUCATION OF HEAD OF HOUSEHOLD								
No Schooling	2.67	.34	–	.33	.18	52.93	43.55	78448
Primary	3.20	.75	.08	.14	.06	48.93	46.83	285898
Secondary +	9.91	1.51	.15	.21	.21	38.34	49.69	157933
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	2.31	.79	.03	.18	.09	48.34	48.26	409887
Government Employee	12.23	.18	.39	.29	.36	39.18	47.36	42348
Parastatal Employee	12.07	3.11	.36	–	.60	44.54	39.32	18992
Private Sector Employee	19.53	1.74	.26	.19	–	36.80	41.47	51053
INCOME GROUP								
Quintile 1	1.51	.48	–	–	–	47.48	50.52	106613
Quintile 2	.87	.64	–	.04	.12	45.08	53.26	125381
Quintile 3	5.69	.95	–	.21	–	49.33	43.82	120216
Quintile 4	7.84	1.13	.19	.66	.16	47.38	42.64	101911
Quintile 5	13.74	1.75	.41	–	.48	39.97	43.65	68159
ALL	5.15	.92	.09	.19	.12	46.33	47.20	522280

			OTHER INSTITUTIONS				
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals

Table 3.1.3c Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and socio-economic characteristics of the household
(Individuals who sought care in a health institution: CSO\LCMS 1996)

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	3.40	1.29	8.36	6.91	.54	40.51	38.94	191150
Female	2.41	.55	4.51	1.48	.18	49.75	39.95	37069
EDUCATION OF HEAD OF HOUSEHOLD								
No Schooling	.48	.47	3.30	.37	–	45.86	48.79	38181
Primary	3.53	.40	4.12	9.46	.71	44.91	36.61	101780
Secondary +	4.09	2.35	13.82	4.51	.43	37.00	37.81	88258
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	2.08	.94	1.64	2.20	–	54.98	37.86	144806
Government Employee	2.48	1.45	4.49	.14	.53	38.56	52.36	18799
Parastatal Employee	6.78	2.23	26.99	.86	1.81	9.04	52.29	36493
Private Sector Employee	5.08	.78	16.28	36.37	1.24	20.31	19.57	28121
INCOME GROUP								
Quintile 1	1.90	.32	.69	.76	.12	52.24	43.51	33445
Quintile 2	1.89	.51	.63	2.51	–	56.10	38.35	46449
Quintile 3	1.53	1.47	3.71	1.95	.83	41.62	48.88	45103
Quintile 4	5.01	.88	12.09	15.22	–	32.76	33.16	43479
Quintile 5	5.02	2.13	17.06	8.10	1.16	32.35	34.18	59744
ALL	3.24	1.17	7.73	6.03	.49	42.01	39.11	228219

	Table 3.1.3d Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and socio-economic characteristics of the household (Individuals who sought care in a health institution: CSO\LCMS 1996)							
	ALL INSTITUTIONS							
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	6.26	1.36	2.38	1.95	.23	44.04	43.46	749165
Female	3.78	.89	1.13	.93	.12	51.52	41.28	180514
EDUCATION OF HEAD OF HOUSEHOLD								
No Schooling	2.40	.51	.91	.29	.20	51.01	44.31	138190
Primary	4.25	.74	1.06	2.35	.19	48.29	42.76	461387
Secondary +	9.33	2.33	4.15	1.53	.23	39.27	42.88	330102
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	3.22	.93	.39	.80	.07	50.48	43.83	667928
Government Employee	9.92	1.49	2.45	.28	.28	39.66	45.68	89569
Parastatal Employee	10.90	3.24	15.25	.56	1.18	22.89	45.57	65506
Private Sector Employee	15.19	1.99	4.76	9.68	.37	33.03	34.28	106677
INCOME GROUP								
Quintile 1	1.69	.61	.15	.47	.03	48.46	48.42	158945
Quintile 2	1.28	.58	.24	.61	.07	49.34	47.52	197041
Quintile 3	4.75	.93	.96	.70	.20	48.09	44.17	206641
Quintile 4	9.39	1.23	3.01	4.01	.08	43.76	38.11	190668
Quintile 5	11.70	3.08	6.47	2.97	.65	37.34	37.16	176383
ALL	5.78	1.27	2.13	1.75	.20	45.49	43.03	929679

Table 3.1.4a Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment and health institution and geographical residence characteristics
(Individuals who sought care in a health institution: CSO\LCMS 1996)

HEALTH INSTITUTION
GOVERNMENT HOSPITAL

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
TYPE OF RESIDENCE								
Rural	4.82	1.23	.24	1.51	–	55.47	36.73	73042
Urban	15.30	3.30	1.49	.48	.16	42.73	36.30	104120
PROVINCE								
Central	6.15	2.12	.05	1.27	–	59.56	30.08	17715
Copperbelt	27.41	5.57	1.38	.13	.45	34.19	60.86	28075
Eastern	2.28	.14	–	–	.14	52.90	44.53	29133
Luapala\Northern	1.63	1.40	1.20	1.93	–	53.28	40.57	29472
Lusaka	32.51	5.42	2.91	.37	–	22.82	35.60	28352
North-Western\Western	.85	1.75	.27	–	–	59.86	37.22	19951
Southern	.55	.22	.40	2.72	–	62.66	33.45	24464
CENTRALITY								
Lus-Ndo-Kit cities	35.05	4.91	3.49	.45	–	20.66	34.99	23624
Provincial capitals	6.53	2.46	.43	1.30	.18	54.65	33.84	22739
District centers	4.29	.41	.98	.13	–	53.24	40.93	42390
Lus-Ndo-Kit w.50km	24.09	7.87	–	–	–	44.70	23.34	7727
Provincial capitals w 30km	–	–	–	–	–	73.61	26.39	5812
District centers w 30km	.43	.68	–	1.55	–	58.27	39.06	39630
Rail Line w 30km	1.19	–	–	–	–	68.80	30.00	2973
Remote areas	18.54	5.01	1.24	1.56	.40	38.09	35.15	31266
ALL	10.98	2.45	.97	.90	.10	47.98	36.48	177162

Table 3.1.4b Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and geographical residence characteristics
(Individuals who sought care in a health institution: CSO\LCMS 1996)

HEALTH INSTITUTION
GOVERNMENT CLINIC/HEALTH CENTER

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
TYPE OF RESIDENCE								
Rural	1.86	.87	–	.09	.08	49.18	47.92	392926
Urban	14.61	1.15	.35	.48	.24	37.74	45.43	134715
PROVINCE								
Central	.93	–	–	.19	–	58.33	40.56	54300
Copperbelt	6.00	1.07	.37	.11	.38	51.33	40.74	55083
Eastern	.22	1.03	–	.06	–	46.42	52.27	75047
Luapala\Northern	.77	.97	–	.04	.14	48.17	49.91	111928
Lusaka	29.76	2.18	.30	.45	.16	20.93	46.21	69689
North-Western\Western	1.00	1.13	–	.10	–	53.17	44.61	66476
Southern	.82	.27	.06	.36	.15	47.78	50.55	95118
CENTRALITY								
Lus-Ndo-Kit cities	33.27	2.09	.42	.64	–	11.75	51.83	49613
Provincial capitals	.63	–	–	.53	–	63.63	35.22	30921
District centers	.68	1.00	.31	.09	.09	50.44	47.39	63184
Lus-Ndo-Kit w.50km	16.87	1.42	–	.42	.46	48.55	32.29	24750
Provincial capitals w 30km	.20	2.25	–	–	–	47.60	49.95	20154
District centers w 30km	.78	1.15	–	.18	–	45.04	52.85	137477
Rail Line w 30km	–	–	–	–	–	50.80	49.20	20737
Remote areas	2.55	.43	.04	.05	.26	51.60	45.07	175443
ALL	5.12	.94	.09	.19	.12	46.26	47.29	527642

	Table 3.1.4c Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and health institution and geographical residence characteristics (Individuals who sought care in a health institution: CSO\LCMS 1996)							
	HEALTH INSTITUTION OTHER							
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
TYPE OF RESIDENCE								
Rural	2.16	.50	3.75	7.59	.38	45.49	39.86	164397
Urban	6.04	2.80	17.71	2.14	.73	33.53	36.90	65623
PROVINCE								
Central	13.69	1.68	6.09	1.54	–	40.11	36.89	10829
Copperbelt	5.00	3.41	17.13	1.83	.72	29.87	42.05	52829
Eastern	3.56	–	1.38	1.59	–	44.27	49.20	28334
Luapala\Northern	1.70	1.06	1.82	.87	.61	55.48	37.92	51776
Lusaka	4.09	.46	14.28	.22	–	56.52	23.96	22731
North-Western\Western	2.24	.10	2.22	.95	–	46.72	47.09	22876
Southern	.16	–	7.36	28.50	1.00	29.19	33.78	40645
CENTRALITY								
Lus-Ndo-Kit cities	3.25	.62	17.64	.29	–	60.40	17.19	17120
Provincial capitals	15.84	2.50	18.09	2.77	1.36	48.88	10.56	7288
District centers	.83	2.46	7.62	1.37	1.01	35.00	51.13	47225
Lus-Ndo-Kit w.50km	7.55	–	7.46	.33	–	66.72	17.94	14790
Provincial capitals w 30km	2.48	–	–	–	.25	69.30	27.97	16267
District centers w 30km	2.50	.14	5.60	15.90	.42	34.17	41.27	72725
Rail Line w 30km	–	4.90	3.86	1.00	–	40.16	50.09	6352
Remote areas	4.19	1.72	9.23	2.55	.39	36.38	45.21	46452
ALL	3.27	1.16	7.73	6.03	.48	42.08	39.01	230020

	Table 3.1.4d Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and health institution and geographical residence characteristics (Individuals who sought care in a health institution: CSO\LCMS 1996)							
	HEALTH INSTITUTION ALL							
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
TYPE OF RESIDENCE								
Rural	2.28	.81	1.00	2.20	.15	48.84	44.41	632621
Urban	12.97	2.23	4.47	.83	.32	38.44	40.37	305222
PROVINCE								
Central	3.71	.67	.81	.60	–	56.21	37.84	82844
Copperbelt	10.02	2.91	7.08	.78	.53	39.42	39.17	136113
Eastern	1.39	.62	.30	.37	.03	47.36	49.89	132583
Luapala\Northern	1.14	1.05	.67	.55	.25	50.68	45.04	194845
Lusaka	25.54	2.62	3.54	.39	.09	28.04	39.48	120928
North-Western\Western	1.23	1.02	.51	.26	–	52.86	43.63	109677
Southern	.61	.19	1.96	7.83	.34	45.16	43.52	160852
CENTRALITY								
Lus-Ndo-Kit cities	28.00	2.54	4.48	.52	–	23.26	40.80	90513
Provincial capitals	4.64	1.21	2.32	1.08	.23	58.35	31.67	61118
District centers	1.72	1.28	2.74	.50	.35	46.25	46.55	153443
Lus-Ndo-Kit w.50km	15.13	2.03	2.33	.32	.24	53.61	26.33	47267
Provincial capitals w 30km	1.04	1.06	–	–	.10	59.93	37.87	42645
District centers w 30km	1.22	.78	1.62	4.96	.12	43.84	47.26	250625
Rail Line w 30km	.12	1.03	.81	.21	–	50.33	47.49	30062
Remote areas	4.81	1.23	1.87	.70	.30	46.98	43.72	254007
ALL	5.76	1.28	2.13	1.76	.20	45.45	43.09	937843

<table>
<tr><td colspan="9">Table 3.1.5a Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and distance from health institution
(Individuals who sought care in a health institution: CSO\LCMS 1996)</td></tr>
</table>

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
HEALTH INSTITUTION GOVERNMENT HOSPITAL								
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	24.26	4.42	2.46	.56	.29	32.99	34.71	43095
1-2	11.40	1.62	.46	.91	–	51.11	34.31	56761
3-4	5.75	3.29	.94	–	.18	48.18	41.65	23579
5-9	.92	3.25	.81	1.38	–	55.34	38.30	22612
10+	3.08	–	–	1.70	–	57.54	37.65	31115
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	12.00	3.27	1.13	.43	.19	44.77	38.22	90497
5-9	16.36	1.92	1.37	.30	–	48.44	30.94	35595
10-19	8.88	2.44	.60	–	–	56.55	31.53	17604
20-39	7.31	1.60	–	–	–	46.07	45.03	16033
40-59	.38	–	1.21	6.62	–	58.28	33.51	9311
60+	–	.11	–	6.02	–	55.21	38.65	8122
ALL	10.98	2.45	.97	.90	.10	47.98	36.48	177162

<table>
<tr><td colspan="9">Table 3.1.5b Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and distance from health institution
(Individuals who sought care in a health institution: CSO\LCMS 1996)</td></tr>
</table>

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
HEALTH INSTITUTION GOVERNMENT CLINIC/HEALTH CENTER								
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	9.64	1.57	.16	.30	.21	34.94	53.17	144978
1-2	5.12	.51	.15	.06	.02	49.60	44.54	155608
3-4	4.86	.44	–	.20	–	47.74	46.76	74590
5-9	.85	.86	–	–	.17	50.53	47.59	85654
10+	1.07	1.25	–	.44	.24	55.89	41.11	66811
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	10.83	1.33	.19	.32	.04	43.37	43.93	69967
5-9	15.71	.89	.54	.33	.29	35.68	46.55	63319
10-19	5.34	1.09	–	.30	–	46.45	46.83	69746
20-39	3.12	1.32	–	.19	.11	47.51	47.75	128310
40-59	1.03	.60	–	.05	.13	44.66	53.54	89490
60+	.78	.46	–	.04	.15	54.13	44.43	106811
ALL	5.12	.94	.09	.19	.12	46.26	47.29	527642

HEALTH INSTITUTION
OTHER

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	5.00	1.15	12.18	2.23	.41	31.83	46.98	68213
1-2	1.95	2.00	10.58	18.85	1.38	35.61	29.43	56784
3-4	–	.76	6.75	4.03	–	49.58	38.41	22536
5-9	6.21	.74	2.19	.76	–	46.72	42.52	32242
10+	1.98	.67	2.47	1.01	.08	56.96	36.83	50245
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	4.16	1.90	13.03	14.59	1.04	32.43	32.85	75527
5-9	3.87	1.76	15.97	2.06	–	46.81	29.52	32507
10-19	5.36	.34	4.08	.90	.13	48.61	39.36	31273
20-39	1.72	–	.68	1.84	–	54.74	41.02	50872
40-59	2.62	2.35	2.09	5.14	2.09	35.58	50.14	13253
60+	.83	.90	3.21	1.11	–	35.05	58.32	26588
ALL	3.27	1.16	7.73	6.03	.48	42.08	39.01	230020

Table 3.1.5d Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and health institution and distance from health institution
(Individuals who sought care in a health institution: CSO\LCMS 1996)

HEALTH INSTITUTION
ALL

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	10.85	1.94	3.74	.86	.27	33.74	48.35	256659
1-2	5.77	1.05	2.41	4.20	.30	46.90	39.18	269548
3-4	4.10	1.05	1.44	.87	.03	47.85	43.90	121528
5-9	2.09	1.22	.63	.40	.10	50.36	44.87	140700
10+	1.79	.78	.83	.89	.13	56.41	38.80	149407
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	9.11	2.25	4.64	4.91	.42	40.25	38.05	236892
5-9	12.94	1.38	4.58	.75	.14	41.84	38.06	131590
10-19	5.86	1.09	1.16	.41	.03	48.44	42.52	118816
20-39	3.09	.99	.18	.60	.07	49.31	45.75	195918
40-59	1.16	.76	.35	1.19	.35	44.59	51.33	112364
60+	.74	.52	.60	.58	.11	50.34	46.47	142262
ALL	5.76	1.28	2.13	1.76	.20	45.45	43.09	937843

Table C3.1 Probability That a Health Institution Patient is Covered under Alternative Cost-sharing Schemes: Multinomial Regression Results (All individuals who visited a health institution)						

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . .   -6269.111
Restricted (Slopes=0) Log-L . . . .   -7149.482
Chi-Squared (80) 1760.741
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
PREPAYMENT LOW COST						
AGE0_4	-0.61692	0.1387	-4.448	0.00001	0.38884	0.48752
AGE5_14	-0.76922	0.1329	-5.789	0.00000	0.21337	0.40972
AGE65	-1.3531	0.6178	-2.190	0.02851	0.15035E-01	0.12170
CHRONIC	-0.16457	0.1454	-1.132	0.25759	0.13132	0.33777
LNINC1	-0.65889E-03	0.1728E-02	-0.381	0.70296	-10.366	142.98
LNSIZE	0.29909E-02	0.1792E-02	1.669	0.09511	-17.950	138.99
HSEX1	-0.82700	0.1199	-6.900	0.00000	0.79239	0.40563
HEDUC1	-1.8713	0.1468	-12.747	0.00000	0.41091	0.49204
HEDUC2	-1.3713	0.1520	-9.024	0.00000	0.45505	0.49802
HEMPGOV	0.34157	0.1602	2.131	0.03305	0.14987	0.35697
HEMPPARA	0.98537	0.1875	5.256	0.00000	0.10669	0.30874
HEMPPRIV	0.70338	0.1535	4.581	0.00000	0.12572	0.33156
CENTRAL	-0.58913	0.2275	-2.590	0.00961	0.96129E-01	0.29479
COPPERB	0.76092	0.1588	4.793	0.00000	0.17306	0.37833
EASTERN	-1.7112	0.3691	-4.636	0.00000	0.11340	0.31711
LUSAKA	1.9272	0.1395	13.811	0.00000	0.18490	0.38825
SOUTHERN	-0.21610	0.4592E-01	-4.706	0.00000	0.96961	2.4183
PREPAYMENT HIGH COST						
AGEO_4	0.10494	0.1931	0.543	0.58692	0.38884	0.48752
AGES_14	-1.1186	0.2534	-4.414	0.00001	0.21337	0.40972
AGE65	-11.434	144.3	-0.079	0.93684	0.15035E-01	0.12170
CHRONIC	-0.27559	0.2654	-1.038	0.29911	0.13132	0.33777
LNINC1	-0.50294E-03	0.2407E-02	-0.209	0.83449	-10.366	142.98
LNSIZE	0.28713E-02	0.2487E-02	1.154	0.24835	-17.950	138.99
HSEX1	-1.2944	0.1851	-6.993	0.00000	0.79239	0.40563
HEDUC1	-2.5324	0.2573	-9.842	0.00000	0.41091	0.49204
HEDUC2	-1.1665	0.2245	-5.196	0.00000	0.45505	0.49802
HEMPGOV	-0.40654	0.3088	-1.316	0.18802	0.14987	0.35697
HEMPPARA	1.1719	0.2900	4.041	0.00005	0.10669	0.30874
HEMPPRIV	0.36194	0.2975	1.217	0.22370	0.12572	0.33156
CENTRAL	-1.7191	0.4336	-3.965	0.00007	0.96129E-01	0.29479
COPPERB	0.20130	0.2304	0.874	0.38219	0.17306	0.37833
EASTERN	-1.5191	0.3993	-3.805	0.00014	0.11340	0.31711
LUSAKA	0.29269E-01	0.2510	0.117	0.90718	0.18490	0.38825
SOUTHERN	-0.33124	0.8497E-01	-3.898	0.00010	0.96961	2.4183

	Table C3.1 Probability That a Health Institution Patient is
Covered under Alternative Cost-sharing Schemes:
Multinomial Regression Results
(All individuals who visited a health institution)

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . .   -6269.111
Restricted (Slopes=0) Log-L . . . .   -7149.482
Chi-Squared (80) 1760.741
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
PAID BY EMPLOYER						
AGE0_4	0.18792	0.1653	1.137	0.25552	0.38884	0.48752
AGE5_14	-0.89978	0.1960	-4.590	0.00000	0.21337	0.40972
AGE65	-0.72385	0.7509	-0.964	0.33505	0.15035E-01	0.12170
CHRONIC	-0.49939E-01	0.2027	-0.246	0.80536	0.13132	0.33777
LNINC1	-0.14911E-02	0.2170E-02	-0.687	0.49202	-10.366	142.98
LNSIZE	0.37384E-02	0.2255E-02	1.658	0.09738	-17.950	138.99
HSEX1	-1.4430	0.1669	-8.644	0.00000	0.79239	0.40563
HEDUC1	-2.4623	0.2143	-11.493	0.00000	0.41091	0.49204
HEDUC2	-1.6855	0.2005	-8.405	0.00000	0.45505	0.49802
HEMPGOV	0.57000	0.2765	2.062	0.03924	0.14987	0.35697
HEMPPARA	3.4158	0.2384	14.330	0.00000	0.10669	0.30874
HEMPPRIV	1.5952	0.2596	6.145	0.00000	0.12572	0.33156
CENTRAL	-2.8379	0.5257	-5.398	0.00000	0.96129E-01	0.29479
COPPERB	-0.13108	0.1997	-0.656	0.51157	0.17306	0.37833
EASTERN	-2.6567	0.5914	-4.492	0.00001	0.11340	0.31711
LUSAKA	-0.23374	0.2193	-1.066	0.28655	0.18490	0.38825
SOUTHERN	-0.17169	0.4253E-01	-4.037	0.00005	0.96961	2.4183
PAID BY OTHER						

Variable	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
AGE0_4	-0.32934	0.2533	-1.300	0.19359	0.38884	0.48752
AGE5_14	-0.65806	0.2324	-2.832	0.00462	0.21337	0.40972
AGE65	-0.82847	0.7603	-1.090	0.27588	0.15035E-01	0.12170
CHRONIC	-0.77435	0.3354	-2.309	0.02096	0.13132	0.33777
LNINC1	-0.17398E-02	0.2393E-02	-0.727	0.46726	-10.366	142.98
LNSIZE	0.39441E-02	0.2474E-02	1.594	0.11095	-17.950	138.99
HSEX1	-1.8484	0.2094	-8.829	0.00000	0.79239	0.40563
HEDUC1	-2.1372	0.2370	-9.019	0.00000	0.41091	0.49204
HEDUC2	-1.7723	0.2733	-6.484	0.00000	0.45505	0.49802
HEMPGOV	-0.37890	0.4608	-0.822	0.41088	0.14987	0.35697
HEMPPARA	1.5851	0.3984	3.978	0.00007	0.10669	0.30874
HEMPPRIV	1.6923	0.2891	5.855	0.00000	0.12572	0.33156
CENTRAL	-2.1986	0.6027	-3.648	0.00026	0.96129E-01	0.29479
COPPERB	-0.19046	0.2926	-0.651	0.51513	0.17306	0.37833
EASTERN	-2.5757	0.7214	-3.570	0.00036	0.11340	0.31711
LUSAKA	-1.1192	0.4240	-2.639	0.00830	0.18490	0.38825
SOUTHERN	0.52143E-01	0.3392E-01	1.537	0.12422	0.96961	2.4183

Table C3.1 Probability That a Health Institution Patient is Covered under Alternative Cost-sharing Schemes: Multinomial Regression Results
(All individuals who visited a health institution)

Multinomial Logit Model
Maximum Likelihood Estimates
Log-Likelihood . . . .   -6269.111
Restricted (Slopes=0) Log-L . . . .   -7149.482
Chi-Squared (80) 1760.741
Significance Level 0.0000000
N[0,1] used for significance levels

Variable*	Coefficient	Standard Error	t-ratio	Prob|t|≥x	Mean of X	Std. Dev. of X
DID NOT PAY						
AGE0_4	1.8691	0.7013E-01	26.650	0.00000	0.38884	0.48752
AGE5_14	0.27035	0.7793E-01	3.469	0.00052	0.21337	0.40972
AGE65	0.76463	0.2261	3.381	0.00072	0.15035E-01	0.12170
CHRONIC	-0.13379E-01	0.9159E-01	-0.146	0.88386	0.13132	0.33777
LNINC1	-0.33447E-03	0.1080E-02	-0.310	0.75672	-10.366	142.98
LNSIZE	0.97623E-03	0.1104E-02	0.885	0.37642	-17.950	138.99
HSEX1	-0.28830	0.7519E-01	-3.834	0.00013	0.79239	0.40563
HEDUC1	-0.89174	0.8528E-01	-10.456	0.00000	0.41091	0.49204
HEDUC2	-0.74774	0.9588E-01	-7.799	0.00000	0.45505	0.49802
HEMPGOV	0.18752	0.9210E-01	2.036	0.04174	0.14987	0.35697
HEMPPARA	0.98590	0.1251	7.884	0.00000	0.10669	0.30874
HEMPPRIV	0.23609E-01	0.1022	0.231	0.81722	0.12572	0.33156
CENTRAL	-0.56555	0.1091	-5.182	0.00000	0.96129E-01	0.29479
COPPERB	0.27052	0.9676E-01	2.796	0.00518	0.17306	0.37833
EASTERN	-0.80250E-01	0.9707E-01	-0.827	0.40839	0.11340	0.31711
LUSAKA	0.31969	0.9627E-01	3.321	0.00090	0.18490	0.38825
SOUTHERN	-0.13545E-01	0.1334E-01	-1.015	0.30997	0.96961	2.4183

*For list and description of variables, see Table B-1.

Table 3.2.1 Demographic-Based Exemptions/Public Health Sector Proportion of (%) of patients who did not pay at public health institutions for the last consultation during the last week preceding the survey by age of the patient and socio-economic characteristics of the household (patients of Government health institutions never diagnosed with a chronic disease: CSO\LCMS 1996)						
PROPORTION (%) OF PATIENTS WHO DID NOT PAY AGE (completed years)						
	< 5	5-14	15-24	25-44	45-64	65+
SEX OF HEAD OF HOUSEHOLD						
Male	71.86	29.61	16.79	21.00	30.45	68.97
Female	70.65	29.89	14.48	30.86	18.05	63.37
EDUCATION OF HEAD OF HOUSEHOLD						
No Schooling	67.18	36.63	13.07	19.81	40.79	68.90
Primary	71.12	28.45	19.26	21.86	19.14	66.83
Secondary +	73.89	28.21	13.91	23.44	35.36	63.28
EMPLOYMENT STATUS HEAD OF HOUSEHOLD						
Self-Employed	72.67	30.88	17.61	24.50	28.44	69.98
Government Employee	69.92	32.81	16.76	24.96	35.50	3.43
Parastatal Employee	74.39	15.12	15.28	9.39	25.62	–
Private Sector Employee	66.57	20.54	9.85	9.00	21.36	–
INCOME GROUP						
Quintile 1	73.31	40.75	21.57	31.62	35.83	70.29
Quintile 2	74.70	34.98	16.69	25.05	20.98	70.85
Quintile 3	68.44	27.10	15.65	19.58	18.63	67.28
Quintile 4	69.79	20.49	13.86	21.05	39.74	47.38
Quintile 5	72.46	23.74	16.43	17.76	8.89	42.53
ALL	71.66	29.69	16.37	22.31	28.26	67.24

	< 5	5-14	15-24	25-44	45-64	65+

Table 3.2.2 Demographic-Based Exemptions/Public Health Sector
Proportion of (%) of patients who did not pay at public health institutions for the
last consultation during the last week preceding the survey by age of the
patient and geographical residence characteristics of the household
(patients of Government health institutions never diagnosed
with a chronic disease: CSO\LCMS 1996)

	PROPORTION (%) OF PATIENTS WHO DID NOT PAY AGE (completed years)					
	< 5	5-14	15-24	25-44	45-64	65+
TYPE OF RESIDENCE						
Rural	70.91	31.00	18.04	25.32	28.87	72.72
Urban	73.31	26.21	13.73	18.08	24.39	28.49
PROVINCE						
Central	65.97	21.24	14.52	13.85	34.70	72.57
Copperbelt	68.84	30.72	8.43	8.50	15.98	86.02
Eastern	78.71	25.56	23.53	28.52	15.12	46.40
Luapala\Northern	73.34	32.61	12.86	21.49	28.25	80.72
Lusaka	72.34	30.58	10.66	26.48	39.14	1.62
North-Western\Western	69.49	29.24	13.13	21.13	9.84	76.54
Southern	67.74	36.04	31.34	36.89	36.01	64.21
CENTRALITY						
Lus-Ndo-Kit cities	77.03	30.64	14.99	25.26	32.35	–
Provincial capitals	65.63	19.44	9.60	10.82	–	27.74
District centers	73.06	31.77	20.72	21.00	29.05	62.73
Lus-Ndo-Kit w. 50km	44.91	27.22	–	24.40	47.62	–
Provincial capitals w 30km	69.81	1.18	9.99	3.24	–	–
District centers w 30km	75.16	37.19	20.17	34.86	28.22	56.89
Rail Line w 30km	73.21	16.75	24.43	19.19	53.43	81.19
Remote areas	71.71	27.80	16.23	16.71	27.34	83.90
ALL	71.66	29.69	16.37	22.31	28.26	67.24

Table 3.2.3 Demographic-Based Exemptions/Public Health Sector						
Proportion of (%) of patients who did not pay at public health institutions for the last consultation during the last week preceding the survey by age of the patient and distance from health facilities (patients of Government health institutions never diagnosed with a chronic disease: CSO\LCMS 1996)						
PROPORTION (%) OF PATIENTS WHO DID NOT PAY AGE (completed years)						
	< 5	5-14	15-24	25-44	45-64	65+
DISTANCE TO NEAREST HEALTH CENTER (km)						
1	78.44	38.66	19.90	27.14	32.64	86.22
1-2	72.39	23.99	11.19	19.44	25.59	64.25
3-4	70.98	26.48	23.57	22.85	26.69	54.01
5-9	64.96	33.60	19.65	19.12	25.28	78.95
10+	67.64	24.44	12.22	19.01	31.03	53.41
DISTANCE TO NEAREST HOSPITAL (km)						
< 5	73.18	23.42	13.00	17.56	28.69	54.83
5-9	69.75	18.94	16.99	17.20	51.07	60.19
10-19	71.98	33.62	10.81	14.42	3.51	77.79
20-39	70.22	33.68	19.49	26.15	33.35	60.83
40-59	75.74	39.14	19.20	42.82	29.54	66.96
60+	69.44	27.84	21.20	22.77	29.57	83.73
ALL	71.66	26.69	16.37	22.31	28.26	67.24

Table 3.2.4 Demographic-Based Exemptions/Public Health Sector
Proportion of (%) of patients who did not pay at public health institutions
for the last consultation during the last week preceding the survey by age
of the patient and socio-economic characteristics of the household
(patients of Government health institutions never diagnosed
with a chronic disease: CSO\LCMS 1996)

	AGE (completed years)			
	< 5 (percent)	5-64 (percent)	65+ (percent)	All (percent)
SEX OF HEAD OF HOUSEHOLD				
Male	57.2	22.4	1.8	81.4
Female	11.4	6.5	.7	18.6
EDUCATION OF HEAD OF HOUSEHOLD				
No Schooling	7.1	5.3	1.1	13.5
Primary	36.7	14.5	1.1	52.3
Secondary +	24.7	9.2	.3	34.2
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD				
Self-Employed	51.1	23.5	2.5	77.1
Government Employee	6.5	3.1	.0	9.6
Parastatal Employee	2.5	.8	–	3.3
Private Sector Employee	8.4	1.6	–	10.0
INCOME GROUP				
Quintile 1	12.8	7.3	.9	21.0
Quintile 2	17.2	6.6	.9	24.8
Quintile 3	15.8	6.1	.5	22.5
Quintile 4	13.2	5.1	.1	18.3
Quintile 5	9.5	3.8	.1	13.4
ALL	68.6	28.9	2.5	100.0

Table 3.2.5 Demographic-Based Exemptions/Public Health Sector
Proportion of (%) of patients who did not pay at public health institutions
for the last consultation during the last week preceding the survey by age
of the patient and geographical residence characteristics of the household
(patients of Government health institutions never diagnosed
with a chronic disease: CSO\LCMS 1996)

AGE (completed years)			
< 5 (percent)	5-64 (percent)	65+ (percent)	All (percent)
TYPE OF RESIDENCE			
Rural	46.8	21.2	2.4	70.3
Urban	21.8	7.8	.1	29.7
CENTRALITY			
Lus-Ndo-Kit cities	7.7	2.6	–	10.2
Provincial capitals	4.5	1.2	.0	5.7
District centers	10.5	4.7	.3	15.5
Lus-Ndo-Kit w 50KM	2.0	1.0	–	3.0
Provincial capitals w 30km	3.2	.2	–	3.4
District centers w 30km	18.4	9.5	.8	28.7
Rail Line w 30km	2.6	1.0	.2	3.8
Remote areas	19.7	8.7	1.2	29.6
ALL	68.6	28.9	2.5	100.0

(Note: the TYPE OF RESIDENCE and CENTRALITY rows have 4 data columns: < 5, 5-64, 65+, All)

Table 3.2.6 Demographic-Based Exemptions/Public Health Sector
Proportion of (%) of patients who did not pay at public health institutions
for the last consultation during the last week preceding the survey by age
of the patient and distance from health facilities
(patients of Government health institutions never diagnosed
with a chronic disease: CSO\LCMS 1996)

AGE (completed years)			
< 5 (percent)	5-64 (percent)	65+ (percent)	All (percent)
DISTANCE TO NEAREST HEALTH CENTER (km)			
< 1	18.4	9.7	.3	28.4
1-2	19.8	6.9	.7	27.3
3-4	10.0	4.2	.2	14.4
5-9	11.1	4.5	.8	16.5
10+	9.3	3.6	.5	13.3
DISTANCE TO NEAREST HOSPITAL (km)			
< 5	14.5	5.0	.2	19.7
5-9	8.8	3.2	.3	12.3
10-19	9.4	2.6	.3	12.2
20-39	15.1	6.9	.7	22.7
40-59	10.1	5.9	.4	16.4
60+	10.7	5.5	.6	16.7
ALL	68.6	28.9	2.5	100.0

Annex E: Tables 4.1.1 - 4.1.4

	Table 4.1.1 Household Health-Related Expenditures Average monthly health-related expenditures (Kwacha) by socio-economic characteristics of the household (National Sample of 11,558 Households)						
Characteristics of Head of Household (HH)	Drugs	Fees to Modern Providers	Fees to Traditional Providers	Hospital Expenses	Contribution to Prepayment Schemes	Total House-hold Health Expenses	Number of Households
SEX OF HEAD OF HOUSEHOLD							
Male	1738.12	433.57	462.94	520.89	312.92	3468.45	1282648
Female	1241.87	516.41	320.48	381.01	278.44	2738.21	410801
EDUCATION OF HEAD OF HOUSEHOLD							
No schooling	871.23	214.69	242.96	355.75	139.62	1824.26	298315
Primary	1033.00	288.81	444.69	379.99	223.00	2369.48	841383
Secondary +	2908.35	832.90	503.51	720.16	517.34	5482.26	553751
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD							
Self-Employed	1159.98	293.20	384.22	371.42	242.51	2451.33	1250470
Government Employee	3198.35	1008.09	582.52	880.07	398.87	6067.90	141904
Parastatal Employee	3594.24	1088.86	568.36	1490.28	801.99	7543.73	98966
Private Sector Employee	2372.32	746.18	524.91	434.45	378.68	4456.53	202108
INCOME GROUP							
Quintile 1	650.97	166.90	355.61	321.73	123.67	1618.88	337046
Quintile 2	773.90	128.59	255.91	282.10	78.28	1518.78	340548
Quintile 3	1346.93	321.42	374.09	437.87	235.98	2716.29	340712
Quintile 4	2115.02	640.69	655.71	441.22	414.42	4267.05	339981
Quintile 5	3218.20	1017.08	501.42	957.54	674.67	6368.90	335161
ALL	1617.74	453.67	428.39	486.95	304.56	3291.30	1693448

	Drugs	Fees to Modern Providers	Fees to Traditional Providers	Hospital Expenses	Contribution to Prepayment Schemes	Total House-hold Health Expenses	Number of Households
TYPE OF RESIDENCE							
Rural	818.02	203.66	365.45	282.88	162.15	1832.16	1145515
Urban	3289.64	976.34	559.96	913.59	602.27	6341.80	547934
PROVINCE							
Central	1954.97	272.94	178.20	509.63	180.93	3096.67	146372
Copperbelt	1863.72	416.67	495.86	700.73	654.19	4131.17	260381
Eastern	787.01	237.81	171.21	229.94	66.66	1492.63	228697
Luapala\Northern	610.87	90.81	164.36	219.81	99.69	1185.53	392956
Lusaka	4328.47	1730.43	917.56	823.77	633.66	8433.88	242385
North-Western\Western	608.32	79.09	408.23	339.92	250.03	1685.60	215098
Southern	1773.40	449.56	753.02	750.78	275.32	4002.08	207559
CENTRALITY							
Lus-Ndo-Kit cities	4878.24	1772.44	691.79	995.78	777.05	9115.30	179328
Provincial capitals	1963.50	581.29	308.35	1037.10	257.35	4147.59	110588
District centers	1184.46	167.16	277.72	502.34	153.89	2285.56	279027
Lus-Ndo-Kit w 50km	2899.53	1237.02	1099.74	418.29	312.64	5967.23	90146
Provincial capitals w 30km	837.50	698.21	277.94	454.24	133.31	2401.20	65357
District centers w 30km	1097.94	129.64	464.94	304.11	201.72	2198.34	397266
Rail Line w 30km	519.96	111.77	299.16	223.80	90.72	1245.41	65327
Remote areas	1048.27	243.96	332.24	371.98	359.50	2355.95	506410
ALL	1617.74	453.67	428.39	486.95	304.56	3291.30	1693448

Table 4.1.2 Household Health-Related Expenditures
Average monthly health-related expenditures (Kwacha) by
geographical residence characteristics of the household
(National Sample of 11,558 Households)

	Drugs	Fees to Modern Providers	Fees to Traditional Providers	Hospital Expenses	Contribution to Prepayment Schemes	Total House-hold Health Expenses	Number of Households
Table 4.1.3 Household Health-Related Expenditures Average monthly health-related expenditures (Kwacha) by distance from health facilities (National Sample of 11,558 Households)							
DISTANCE TO NEAREST HOSPITAL (km)							
< 5	2722.13	723.58	551.63	1027.94	544.50	5569.78	399970
5-9	2800.28	948.97	334.69	489.32	448.49	5021.74	229724
10-19	1153.08	523.46	411.93	266.93	270.63	2626.02	235499
20-39	768.57	154.17	367.20	328.86	158.30	1777.10	332862
40-59	1061.62	216.97	742.04	308.56	189.10	2518.29	203617
60 +	904.64	144.23	197.41	225.94	137.14	1609.35	291776
DISTANCE TO NEAREST HEALTH CENTER (km)							
< 1	2769.53	829.17	541.50	784.86	536.13	5461.19	391591
1-2	1991.31	557.59	406.12	686.37	343.70	3985.09	410337
3-4	1277.85	147.23	426.71	305.68	203.88	2361.35	217761
5-9	881.15	286.69	289.99	212.13	192.31	1862.26	295500
10 +	791.20	259.07	444.52	281.27	168.01	1944.08	378259
ALL	1617.74	453.67	428.39	486.95	304.56	3291.30	1693448

Characteristics of Head of Household (HH)	Drugs	Fees to Modern Providers	Fees to Traditional Providers	Hospital Expenses	Contribution to Prepayment Schemes	Total House-hold Health Expenses	Number of Households
Table 4.1.4 Household Health-Related Expenditures Population Estimates							
SEX OF HEAD OF HOUSEHOLD							
Male	2.229E+09	556120607	593795211	668113946	401369812	4.449E+09	1282648
Female	510159808	212142768	131653310	156517163	114384861	1.125E+09	410801
EDUCATION OF HEAD OF HOUSEHOLD							
No schooling	259900681	64046274	72479811	106125595	41650521	544202881	298315
Primary	869152532	242995959	374151540	319714686	187626802	1.994E+09	841383
Secondary +	1.610E+09	461221142	278817170	398790828	286477351	3.036E+09	553751
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD							
Self-Employed	1.451E+09	366642865	480449361	464451608	303249876	3.065E+09	1250470
Government Employee	453859093	143052170	82661820	124885969	56601000	861060052	141904
Parastatal Employee	355709689	107760550	56249010	147487445	79370192	746576886	98966
Private Sector Employee	479463624	150807790	106088330	87806087	76533606	900699437	202108
INCOME GROUP							
Quintile 1	219406949	56252359	119856741	108438039	41681162	545635249	337046
Quintile 2	263548688	43791200	87150405	96068899	26657522	517216714	340548
Quintile 3	458915786	109512350	127456710	149186080	80400252	925471178	340712
Quintile 4	719065689	217821315	222929325	150007293	140893396	1.451E+09	339981
Quintile 5	1.079E+09	340886151	168055340	320930798	226122342	2.135E+09	335161
TYPE OF RESIDENCE							
Rural	937048914	233293894	418627785	324043182	185750143	2.099E+09	1145515
Urban	1.803E+09	534969481	306820736	500587927	330004531	3.475E+09	547934
PROVINCE							
Central	286152784	39950300	26084130	74596070	26482835	453266119	146372
Copperbelt	485278210	108491877	129113915	182457895	170338680	1.076E+09	260381
Eastern	179986935	54386885	39155285	52585906	15245276	341360287	228697
Luapala\Northern	240044761	35682834	64586026	86373755	39172360	465859735	392956
Lusaka	1.049E+09	419429894	222402250	199668543	153590408	2.044E+09	242385
North-Western\Western	130848894	17011370	87810325	73116900	53780695	362568184	215098
Southern	368084075	93310215	156296590	155832040	57144420	830667340	207559
DISTANCE TO NEAREST HOSPITAL (km)							
< 5	1.089E+09	289410601	220637596	411145232	217782151	2.228E+09	399970
5-9	643292573	218000245	76885560	112408405	103028071	1.154E+09	229724
10-19	271547744	123273930	97008675	62861655	63732814	618424818	235499
20-39	255826323	51318005	122226280	109464305	52693570	591528483	332862
40-59	216164160	44178030	151091240	62828792	38503808	512766030	203617
60 +	263951458	42082564	57599170	65922720	40014260	469570172	291776
DISTANCE TO NEAREST HEALTH CENTER (km							
< 1	1.085E+09	324694374	212046560	307344493	209944612	2.139E+09	391591
1-2	817108842	228798496	166645645	281642338	141032253	1.635E+09	410337
3-4	278266897	32060070	92920230	66566384	44398159	514211740	217761
5-9	260378645	84715570	85691796	62683705	56827293	550297009	295500
10 +	299278294	97994865	168144290	106394189	63552356	735363994	378259
ALL	2.740E+09	768263375	725448521	824631109	515754674	5.574E+09	1693448

Annex F: Tables E1.2.3 - E3.1.4d

Table E1.2.3 Self-Medication Proportion (%) of sick individuals who used self-medication only and average amount they spent on self-medication during the last two weeks preceding the survey by socio-economic characteristics of the household (individuals who reported an illness: CSO\LCMS 1996)		
COPPERBELT AND LUSAKA PROVINCE		
Characteristics of Head of Household (HH)	Self-Medication Only	Average Self-Medication Expenses (K)
SEX OF HEAD OF HOUSEHOLD		
Male	34.11	1264.35
Female	40.10	1019.74
EDUCATION OF HEAD OF HOUSEHOLD		
No schooling	35.53	843.43
Primary	37.29	1015.24
Secondary +	33.62	1466.56
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD		
Self-Employed	37.39	940.84
Government Employee	32.18	1099.19
Parastatal Employee	24.87	1346.82
Private Sector Employee	37.90	1738.93
INCOME GROUP		
Quintile 1	29.66	552.54
Quintile 2	35.75	430.68
Quintile 3	34.35	785.15
Quintile 4	37.15	1248.01
Quintile 5	35.17	1728.59
ALL	35.24	1212.42

			Government	Government	Mission	Industrial	Private	Traditional

Table E1.3.3 Provider Choice
Proportion of (%) of sick individuals who sought care and provider choice
by self-reported symptoms in the last two weeks preceding
the survey by socio-economic characteristics of the household
(individuals who reported an illness: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

	Did Not Use	Did Use	Government Hospital	Government Clinic/H Center	Mission Institution	Industrial Institution	Private Institution	Traditional Healer
SEX OF HEAD OF HOUSEHOLD								
Male	53.74	46.26	10.47	21.82	11.72	6.79	3.78	.75
Female	59.86	40.14	7.80	22.11	7.18	2.11	4.88	.19
EDUCATION OF HEAD OF HOUSEHOLD								
No Schooling	59.45	40.55	6.27	21.67	11.73	6.73	2.65	1.41
Primary	58.59	41.41	9.30	22.88	5.79	2.00	2.57	.73
Secondary +	51.01	48.99	11.37	21.17	14.48	8.66	5.38	.40
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	58.53	41.47	9.53	22.10	5.81	1.27	3.18	.85
Govt. Employee	49.13	50.87	17.43	24.84	7.22	1.79	4.58	.46
Parastatal Employee	38.95	61.05	6.51	15.03	39.36	32.88	6.12	.33
Private Sector Empl.	58.75	41.25	10.30	24.16	6.43	1.67	4.20	.49
INCOME GROUP								
Quintile 1	52.44	47.56	4.49	27.72	7.92	2.53	2.61	.56
Quintile 2	60.80	39.20	4.43	25.00	2.74	.30	2.25	.19
Quintile 3	57.02	42.98	8.47	26.88	4.34	.91	2.40	.66
Quintile 4	59.01	40.99	10.76	20.39	8.24	3.81	3.34	.85
Quintile 5	49.07	50.93	12.67	18.21	19.67	12.84	6.23	.58
ALL	54.89	45.11	9.97	21.88	10.87	5.91	3.99	.65

Table E3.1.1 Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution
(individuals who sought care in a health institution: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
HEALTH INSTITUTION								
Government Hospital	29.97	5.50	2.15	.25	.22	28.48	33.24	56427
Govt Clinic/H. Center	19.27	1.69	.33	.30	.26	34.35	43.80	124772
Mission Institution	4.64	–	3.87	.80	–	79.14	11.55	13723
Industrial Institution	4.53	3.68	26.72	1.41	1.13	3.32	59.21	33820
Private Institution	6.08	2.94	12.06	1.90	–	59.65	16.90	22596
Traditional Healer	–	–	–	–	–	67.81	32.19	3643
Other	1.46	–	–	–	–	39.04	59.50	1779
HEALTH INSTITUTION								
Government Hospital	29.97	5.50	2.15	.25	.22	28.48	33.24	56427
Govt Clinic/H. Center	19.27	1.69	.33	.30	.26	34.35	43.80	124772
Other	4.72	2.52	16.27	1.35	.51	37.89	36.61	75561
ALL	17.32	2.77	5.42	.60	.32	34.06	39.32	257041

Table E3.1.2a Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution and
demographic characteristics of the patient
(individuals who sought care in a health institution: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

HEALTH INSTITUTION
GOVERNMENT HOSPITAL

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	13.08	4.99	2.71	.53	–	17.34	60.83	20048
5-14	32.39	5.32	2.45	–	1.42	37.68	20.73	8912
15-24	41.95	4.80	1.41	–	–	32.56	19.27	11050
25-44	44.68	6.25	1.54	.26	–	33.10	14.17	14387
45-64	23.00	14.48	5.33	–	–	30.57	26.61	1375
65 +	3.37	–	–	–	–	69.35	27.27	655
SEX								
Male	29.86	5.04	3.03	.12	–	28.48	33.12	29980
Female	30.10	6.02	1.14	.40	.48	28.48	33.38	26447
ALL	29.97	5.50	2.15	.25	.22	28.48	33.24	56427

Table E3.1.2b Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution and
demographic characteristics of the patient
(individuals who sought care in a health institution: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

HEALTH INSTITUTION
GOVERNMENT CLINIC/HEALTH CENTER

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	9.47	1.04	.20	.20	–	15.19	73.89	52341
5-14	24.51	1.06	–	.45	.74	39.12	34.13	23400
15-24	32.82	5.31	.28	.24	–	52.33	9.01	24315
25-44	26.07	.14	.56	.56	.81	52.10	19.78	18929
45-64	7.93	–	–	–	–	68.12	23.96	4139
65 +	6.40	–	8.07	–	–	21.33	64.21	1647
SEX								
Male	17.42	1.68	.64	.11	.26	35.78	44.11	53323
Female	20.64	1.70	.10	.44	.26	33.29	43.57	71449
ALL	19.27	1.69	.33	.30	.26	34.35	43.80	124772

Table E3.1.2c Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution and
demographic characteristics of the patient
(individuals who sought care in a health institution: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

HEALTH INSTITUTION
OTHER

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	5.33	3.36	15.00	.75	1.21	34.72	39.64	26054
5-14	4.71	2.08	18.09	1.21	–	21.89	52.02	13232
15-24	6.00	1.95	14.77	1.94	–	41.81	32.85	15669
25-44	3.80	2.78	16.94	.78	.41	43.71	31.57	16216
45-64	–	–	26.78	1.45	–	66.53	5.23	3474
65 +	–	–	–	19.68	–	80.32	–	915
SEX								
Male	5.71	2.58	18.92	.91	1.00	34.56	36.04	38265
Female	3.70	2.47	13.55	1.79	–	41.30	37.19	37295
ALL	4.72	2.52	16.27	1.35	.51	37.89	36.61	75561

Table 3.1.2d Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and health institution and demographic characteristics of the patient (Individuals who sought care in a health institution: CSO\LCMS 1996)							
Health Institution All							
	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
AGE (COMPLETED YEARS)								
< 5	3.04	1.48	1.66	.74	.21	26.42	66.13	376102
5-14	6.04	.76	1.99	3.56	.25	55.55	31.63	200603
15-24	9.41	1.68	2.28	1.82	–	63.52	20.99	161635
25-44	9.88	1.39	3.27	2.22	.46	56.82	25.29	136468
45-64	3.30	.61	2.71	.79	–	65.58	26.84	43113
65+	1.47	–	2.21	1.14	–	35.15	60.02	19921
SEX								
Male	5.87	1.23	3.06	1.01	.24	44.80	43.41	432206
Female	5.66	1.32	1.33	2.39	.17	46.01	42.82	505637
ALL	5.76	1.28	2.13	1.76	.20	45.45	43.09	937843

Table E3.1.3a Prepayment Scheme Distribution (%) of sick individuals who sought care by type of payment and socio-economic characteristics of the household (individuals who sought care in a health institution: CSO\LCMS 1996)							
GOVERNMENT HOSPITAL: COPPERBELT AND LUSAKA PROVINCES							
	Prepay- ment Low Cost	Prepay- ment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	31.28	6.16	2.08	.22	.26	29.63	30.14	47827
Female	23.67	1.89	2.65	–	–	22.30	49.48	8243
EDUCATION OF HEAD OF HOUSEHOLD								
No schooling	17.12	5.94	–	–	2.97	36.35	37.62	4253
Primary	33.13	1.51	.87	–	–	28.29	36.19	19725
Secondary +	30.07	7.95	3.24	.33	–	27.68	30.40	32092
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	30.96	3.30	–	.39	.47	32.85	31.63	26787
Government Employee	24.24	7.96	8.63	–	–	20.99	38.18	9535
Parastatal Employee	35.71	9.21	1.41	–	–	16.99	36.68	5196
Private Sector Employee	30.60	6.74	2.17	–	–	29.72	30.77	14553
INCOME GROUP								
Quintile 1	22.96	3.81	–	–	–	17.60	55.63	1922
Quintile 2	20.23	3.76	–	–	–	41.10	34.91	1949
Quintile 3	20.43	.76	3.19	–	–	33.59	42.02	9583
Quintile 4	35.51	4.10	1.34	–	–	28.72	30.34	18515
Quintile 5	31.30	8.82	2.73	.44	.52	26.28	29.47	24101
ALL	30.16	5.53	2.16	.19	.23	28.55	32.99	56070

Table E3.1.3b Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and socio-economic characteristics of the household
(individuals who sought care in a health institution: CSO\LCMS 1996)

GOVERNMENT CLINIC OR HEALTH CENTER: COPPERBELT AND LUSAKA PROVINCES

	Prepay-ment Low Cost	Prepay-ment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	20.42	1.50	.31	.27	.33	34.11	43.06	99646
Female	15.35	1.92	.45	.45	–	36.12	45.71	23358
EDUCATION OF HEAD OF HOUSEHOLD								
No schooling	12.31	1.06	–	.72	–	42.23	43.68	14702
Primary	14.75	.53	.49	.22	–	40.99	43.01	48559
Secondary +	25.05	2.55	.29	.28	.54	27.30	43.99	59743
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	10.93	1.25	.17	.50	.09	41.00	46.06	63285
Government Employee	34.99	.56	.78	.44	1.12	18.41	43.71	13591
Parastatal Employee	19.10	4.93	.57	–	.94	36.09	38.37	12000
Private Sector Employee	29.22	1.40	.39	–	–	28.27	40.72	34128
INCOME GROUP								
Quintile 1	4.93	1.12	–	–	–	45.33	48.62	11861
Quintile 2	7.75	–	–	–	–	56.78	35.46	10990
Quintile 3	22.30	2.08	–	.35	–	32.73	42.56	30412
Quintile 4	19.19	1.22	.38	.77	–	31.94	46.50	35098
Quintile 5	25.93	2.15	.81	–	.94	27.85	42.33	34644
ALL	19.46	1.58	.34	.31	.26	34.49	43.57	123004

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals

Table E3.1.3c Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and socio-economic characteristics of the household
(individuals who sought care in a health institution: CSO\LCMS 1996)

OTHER INSTITUTIONS: COPPERBELT AND LUSAKA PROVINCES

	Prepay-ment Low Cost	Prepay-ment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	4.96	2.72	16.57	.72	.50	35.96	38.42	63484
Female	2.65	1.67	15.13	4.01	.62	47.88	28.04	10805
EDUCATION OF HEAD OF HOUSEHOLD								
No schooling	2.05	2.14	13.07	–	–	36.81	45.93	8418
Primary	3.55	.88	12.56	1.74	–	50.62	30.11	19576
Secondary +	5.54	3.36	18.56	1.19	.83	32.38	38.14	46295
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	3.33	2.81	7.06	2.32	–	67.10	17.38	28609
Government Employee	10.02	3.89	9.98	–	–	42.88	33.25	4654
Parastatal Employee	3.33	2.59	26.39	.56	1.22	7.67	58.24	31426
Private Sector Employee	10.10	1.10	14.35	.51	–	45.81	27.04	9600
INCOME GROUP								
Quintile 1	–	1.60	3.52	3.85	–	61.45	29.58	6568
Quintile 2	12.37	–	6.82	–	–	70.33	10.48	4296
Quintile 3	1.22	4.08	7.66	.70	–	58.11	28.23	8640
Quintile 4	4.40	2.14	21.41	1.66	–	40.24	29.52	16836
Quintile 5	5.42	2.87	19.40	.78	1.01	24.11	46.42	37949
ALL	4.62	2.57	16.36	1.20	.51	37.69	36.91	74289

	Prepayment Scheme							

Table E3.1.3d Prepayment Scheme
Distribution (%) of sick individuals who sought care by type of payment
and socio-economic characteristics of the household
(individuals who sought care in a health institution: CSO\LCMS 1996)

ALL INSTITUTIONS: COPPERBELT AND LUSAKA PROVINCES

	Prepay- ment Low Cost	Prepay- ment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	Number of Individuals
SEX OF HEAD OF HOUSEHOLD								
Male	18.21	2.92	5.60	.39	.36	33.61	38.68	211240
Female	13.73	1.85	4.62	1.27	.16	36.43	41.94	42406
EDUCATION OF HEAD OF HOUSEHOLD								
No schooling	9.88	2.15	4.01	.38	.46	39.58	43.35	27424
Primary	16.36	.83	3.26	.51	–	40.24	38.56	87966
Secondary +	19.66	4.07	7.09	.59	.51	29.07	38.84	138256
EMPLOYMENT STATUS OF HEAD OF HOUSEHOLD								
Self-Employed	13.60	2.09	1.79	.91	.16	45.41	35.86	118787
Government Employee	27.07	3.65	5.00	.21	.55	23.35	39.99	27830
Parastatal Employee	10.66	3.87	17.30	.36	1.02	15.64	50.90	48748
Private Sector Employee	26.41	2.68	3.13	.08	–	31.52	35.98	58281
INCOME GROUP								
Quintile 1	5.04	1.53	1.14	1.24	–	47.91	43.14	20351
Quintile 2	10.31	.43	1.70	–	–	58.39	29.17	17234
Quintile 3	18.18	2.17	1.99	.34	–	37.41	39.91	48636
Quintile 4	19.92	2.19	5.65	.78	–	33.03	38.14	70555
Quintile 5	19.18	4.09	8.57	.42	.86	25.94	40.65	96870
ALL	17.46	2.74	5.43	.54	.33	34.08	39.23	253646

Table E3.1.4a Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution and
distance from health institution
(individuals who sought care in a health institution: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

HEALTH INSTITUTION
GOVERNMENT HOSPITAL

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	34.14	5.96	3.18	.49	.44	24.87	30.91	28781
1-2	27.96	3.05	.40	–	–	27.64	40.39	18528
3-4	27.98	9.53	5.39	–	–	30.09	27.00	4127
5-9	5.85	14.57	–	–	–	36.74	42.85	2944
10 +	28.35	–	–	–	–	71.65	–	2046
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	29.27	7.08	1.60	.12	.40	24.91	36.62	31556
5-9	34.69	2.64	3.12	.67	–	26.80	31.41	15654
10-19	30.95	8.49	2.09	–	–	41.49	16.99	5050
20-39	27.93	1.07	–	–	–	21.78	49.23	2439
40-59	–	–	8.88	–	–	82.25	8.88	1274
60 +	–	–	–	–	–	75.00	25.00	452
ALL	29.97	5.50	2.15	.25	.22	28.48		56427

| | Table E3.1.4b Prepayment Scheme |
| Distribution (%) of sick individuals who sought care |
| by type of payment and health institution and |
| distance from health institution |
| (individuals who sought care in a health institution: CSO\LCMS 1996) |

COPPERBELT AND LUSAKA PROVINCE

**HEALTH INSTITUTION
GOVERNMENT CLINIC/HEALTH CENTER**

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	20.44	2.45	.26	.55	.44	29.25	46.60	68034
1-2	20.00	.33	.70	–	.08	36.35	42.55	34101
3-4	31.79	3.25	–	–	–	24.25	40.71	10096
5-9	1.14	–	–	–	–	57.36	41.50	9232
10 +	–	–	–	–	–	85.23	14.77	3310
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	18.20	2.29	.17	.15	.06	32.84	46.29	40578
5-9	25.69	1.32	.89	.54	.48	23.00	48.08	38714
10-19	11.62	.71	–	.40	–	48.34	38.94	26580
20-39	48.35	5.94	–	–	–	16.64	29.07	6264
40-59	7.88	–	–	–	1.51	49.16	41.45	7504
60 +	–	2.20	–	–	–	59.41	38.39	5132
ALL	19.27	1.69	.33	.30	.26	34.35	43.80	124772

Table E3.1.4c Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution and
distance from health institution
(individuals who sought care in a health institution: CSO\LCMS 1996)

COPPERBELT AND LUSAKA PROVINCE

HEALTH INSTITUTION
OTHER

	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	5.01	1.42	16.60	1.48	.43	31.00	44.06	42324
1-2	3.88	6.49	17.39	1.61	1.15	34.43	35.05	17468
3-4	–	3.00	26.55	.85	–	46.01	21.73	5730
5-9	7.86	–	7.21	.62	–	67.51	16.79	9799
10 +	–	–	–	–	–	100.00	–	239
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	5.37	3.40	17.56	.87	.97	24.36	47.47	39523
5-9	2.93	2.48	22.65	3.62	–	48.37	19.95	18512
10-19	3.89	1.10	9.72	–	–	39.42	44.79	9605
20-39	9.46	–	–	–	–	90.54	–	5613
40-59	–	–	–	–	–	84.67	15.33	738
60 +	–	–	14.42	–	–	35.12	50.46	1569
ALL	4.72	2.52	16.27	1.35	.51	37.89	36.61	75561

Table E3.1.4d Prepayment Scheme
Distribution (%) of sick individuals who sought care
by type of payment and health institution and
distance from health institution
(individuals who sought care in a health institution: CSO\LCMS 1996)

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	Prepayment Low Cost	Prepayment High Cost	Paid by Employer	Paid by Other	Paid Partly by Other	Paid Directly	Did Not Pay	All
DISTANCE TO NEAREST HEALTH CENTER (km)								
< 1	18.55	2.86	5.82	.82	.43	28.83	42.51	139370
1-2	18.09	2.58	4.78	.40	.32	33.57	40.11	70097
3-4	21.82	4.47	8.72	.24	–	31.63	32.34	20004
5-9	4.77	1.95	3.22	.28	–	59.12	30.66	21975
10 +	10.37	–	–	–	–	80.89	8.74	5596
DISTANCE TO NEAREST HOSPITAL (km)								
< 5	16.76	4.03	6.72	.40	.48	27.55	43.90	111834
5-9	21.81	1.89	6.89	1.35	.25	30.22	37.30	72986
10-19	12.18	1.75	2.52	.26	–	45.49	37.61	41235
20-39	29.62	2.78	–	–	–	46.49	21.10	14316
40-59	6.22	–	1.19	–	1.19	56.35	35.06	9517
60 +	–	1.58	3.16	–	–	55.07	40.19	7154
ALL	17.32	2.77	5.42	.60	.32	34.06	39.32	257041

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